A WINDOW OPEN ON THE WORLD

The UNESCO Courier

700,000,000 ILLITERATES: TWO PERSONS OUT OF FIVE

MARCH
1958
(11th year)

Price: 1/-stg. (U. K.)
30 cents (U. S.)
50 francs (France)

UNESCO

'FIRST–AID' FOR GUATEMALA'S COLONIAL ART

Shady cloisters of an ancient Capucine convent in Antigua, Guatemala, are being used as a "casualty clearing station" for damaged and time-worn paintings due for restoration in the "picture hospital" of Guatemala City. Propped against massive pillars and lying on trestles, Colonial period paintings are being selected for treatment by team of Guatemalan artists supervised by one of the world's leading picture restorers, Helmut Ruhemann, (figure in background, on right). Ruhemann was sent to Guatemala by Unesco to survey Colonial paintings, to start a restoration programme and to plan training courses for Guatemalan restorers. (See page 32)

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Published monthly by
The United Nations Educational, Scientific and Cultural Organization

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THE UNESCO COURIER is published monthly (12 issues a year) in English, French, Spanish and Russian. The United States of America edition is distributed by the UNESCO Publications Center. U.S.A. 801 Third Avenue, New York 22, N.Y., Plaza 1-3860. Second-class mail privileges authorized at New York, N.Y. (M.C. 58.1.122 A)

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Annual subscription rates: $3.00 ; 10/- stg. ; 500 French francs or equivalent.

COVER PHOTO

There are about 700 million adult illiterates in the world today. They represent 45 per cent of the total world population 15 years old and over. Almost half of all the countries and territories of the world are believed to have fifty per cent or more illiteracy among their adult population. In about one-third of all countries there are at least a million illiterates in each country Such in broad terms is the magnitude of the problem presented by world illiteracy in the middle of the 20th century.

Photos: "O. Cruzeiro", Brazil and UNESCO

EVER since its foundation UNESCO has been concerned with the problems of widespread illiteracy among the world's peoples and with the measures taken for its elimination. A large portion of UNESCO's efforts in the first ten years of its existence has been directed towards the promotion of fundamental education, particularly in educationally less well-developed areas of the world.

There is now abundant evidence to show that illiteracy goes would have us believe that the illiterate inhabitants of distant "exotic" lands should be left to keep their traditional ways, free from the stress and hustle of technically advanced societies. Why waste time and money on illiterate slum-dwellers or peasants who appear to like it that way? Whatever case can be made out in support of the thesis that isolated illiterate communities are—or once were—stable, relatively happy and prosperous, there is now hardly any region of the world where backward or pre-technical societies are not feeling to some extent the disruptive impact of modern technology.

There is now abundant evidence to show that illiteracy goes hand-in-hand with under-nourishment, endemic disease, poverty, endless and unrewarding drudgery, demoralization. This is not to say that illiteracy has "caused" these ills or that they will be automatically removed by the simple expedient of teaching everyone to read and write. But it can no longer be denied that social and economic improvement in these regions can be achieved only through the assimilation of modern techniques of production, distribution, medical and social welfare, etc, and that the assimilation of these techniques requires education and that a basic part of this education will be learning to read and write.

The relationship between the growth of literacy and changing techniques is observable in the history of the technically advanced countries. In Europe and North America the spread of literacy accompanied the increase of industrialization begun by the Industrial Revolution. Mass literacy arrived only in the second half of the 19th century, or even later. The introduction of free and compulsory education was, and remains, the direct agent in the process of reducing illiteracy. In some countries the extension of popular education preceded the rapid industrial advance, in others it followed ; but the two phenomena have always been closely associated.

It would be a mistake, however, to regard literacy as merely a function of industrialization. Literacy and industrialization are both means, not ends. They are, or should be, means for achieving a better life. Besides the improvement of his material lot, a man must be literate if he is to take an intelligent and active part in the organization and life of his community and assume his full stature as a human being. As long as more than two-fifths of the world's adult population cannot read and write in any language, and are thus deprived of their full participation in the cultural life of mankind, the question of world illiteracy must continue to be of concern to all.

700,000,000 illiterates

IS WORLD ILLITERACY ON THE INCREASE ?

by Bangnee A. Liu
Chief, Statistical Division, Unesco

U.N.

WAR ON IGNORANCE is declared in Liberia as a low-flying plane "bombards" a village with leaflets to announce the opening of a nation-wide campaign against illiteracy. In the front ranks of this campaign are teachers of the rural schools which are now being opened throughout the country by the Liberian Government and staffed with graduates of a teacher training centre operated near Monrovia by the Government and Unesco.

THE World Census of Population which is to be taken around 1960 should help to answer one of the vitally important questions of our time: Is the world's illiterate population increasing, in spite of the remarkable progress made in many countries towards the goal of universal primary education?

The number of adult illiterates (people over 15 years of age who cannot both read and write in any language) in the world around 1950 has been estimated at about 700 million—slightly over two-fifths of the world's population at that age level. This figure is based on an analysis of recent census results from 75 countries, supplemented by estimates for the other countries, using outdated or incomplete census data, school enrolment figures and other relevant information obtained by UNESCO. Detailed results of this study, including methods of defining and counting illiterates and analyses of data for some 65 individual countries, are presented in a new UNESCO publication : *World Illiteracy at Mid-Century* (*Monographs on fundamental education, XI, Paris,* 1957).

The only previous study on this subject, comparable in scope though not in methods, is contained in a bulletin of the U.S. Bureau of Education published in 1929. The authors of that study gave an estimate of 850 million illiterates in the world 10 years of age and over. If we were to use the same age level of population for our 1950 estimate, we would probably arrive at a world estimate of 800 to 840 million illiterates, thus showing apparently very little reduction in the *absolute size* of the world's illiterate population in the last 25 years or so, even though the total *illiteracy rate* was estimated at 62 per cent in the earlier study, as compared with our estimate of 43-45 per cent for 1950.

★

THE phenomenon of an illiterate population increasing in numbers or unchanged while the illiteracy rate goes down is by no means as uncommon as one would think. Here are a few examples from the figures analysed in the UNESCO study. There are probably many other cases of this kind for which we do not have the necessary statistics. The original sources of the data which follows are usually the official census publications of the respective countries, the latest issues only being cited by title in the recent UNESCO monograph on illiteracy. The latest (1950) census in Brazil shows an illiterate population of 15.3 million persons 15 years old and over—50.6 per cent of the total population at that age level. In comparison, the number and percentage of illiterates at each of three previous censuses were as follows: 1900 census 6.3 million illiterates (65.3 %) ; 1920 census 11.4 million illiterates (64.9 %) ; 1940 census 13.3 million illiterates (56.1 %).

Thus, while the illiteracy rate for Brazil has been steadily going down, the number of illiterates has been steadily *increasing* since the beginning of the century, undoubtedly due to the rapid growth of population not matched by the increased provisions for the rudimentary education of children and adults.

Much the same situation is found in Egypt, as shown by the census figures for 1907-1947. While the illiteracy rate went down during those 40 years from 92.8 to 80.1 per cent, the number of illiterate persons 15 years old and over *increased* steadily from 6.2 million to 9.1 million (or possibly 9.5 million) in the same period.

Illiteracy among the population 15 years old and over at the 1951 census in India was 80.7 per cent according to a 10 per cent sample tabulation of the census returns. In pre-partition India, the illiteracy rate had declined from 93.5 per cent in 1901 to 90.4 per cent in 1931, but the number of illiterate persons had increased from 162 million to 182 million during those 30 years.

In Turkey the number and percentage of illiterate persons 15 years old and over at the three censuses in 1935, 1945 and 1950 were as follows : 1935 census 7.7 million illiterates (81.3 %) ; 1945 census 8.1 million illiterates (71.5 %) ; 1950 census 8.8 million illiterates (68.1 %).

According to Ceylon's 1946 census, there were nearly 2.5 million illiterate persons, 5 years old and over—more than at any of the previous censuses, though the illiteracy rate had been steadily declining, as follows : 1901 census 2.2 million illiterates (73.6 %) ; 1911 census 2.4 million illiterates (69.0 %) ; 1921 census 2.3 million illiterates (60.1 %) ; 1946 census 2.4 million illiterates (42.2 %).

In Mexico the number of illiterate persons 6 years old and over was found to be nearly 9 million in 1950, or about the same number as in 1930. The illiterate population aged 10 years and over in 1940 was 7.5 million, as compared with 7.6 million in 1900.

In Portugal, there were 2.6 million illiterate persons 15 years old and over in 1950—almost exactly the same number as in 1900, yet the illiteracy rate had gone down from 73.1 to 44.1 per cent.

The number and percentage of illiterates 15 years old and over in Venezuela were, between 1936 and 1950, as follows: 1936 census 1.2 million (61.0 %) ; 1941 census 1.3 million (58.5 %); 1950 census 1.4 million (47.8 %).

The magnitude of the illiteracy problem and its seriousness are brought home when it is looked at on a world scale. A measure of the problem is given by statistics relating to the 1950 census period which show that 90 per cent of the world's illiterates are concentrated in 43 large countries and 54 smaller ones, all with medium to high illiteracy rates. These countries (shown in Table 1, as groups A and B) are mostly situated in Asia, Africa, Central and South America, and include some of the territories in Oceania. Another 9 per cent of the illiterate population are found in 20 countries (Table 1, group C) with low to medium illiteracy rates. This group includes, for example, Japan, U.S.A. and France, with illiteracy rates below 5 per cent but with an estimated total of 5 to 7 million adult illiterates between them. The remaining 1 per cent of illiterates, numbering 8 or 9 million, are scattered among 81 countries (Table 1, group D), all with low to medium illiteracy rates, and each with an illiterate population varying from a few hundred to almost a million.

Table 1. — Estimated distribution of the world's illiterate population, around 1950

Group of countries	Number of countries	Estimated number of adult illiterates	Estimated proportion of world's illiterates
		(millions)	(per cent)
A. Countries with estimated 50 per cent or more illiteracy and 1 million or more adult illiterates	43	600-640	88
B. Countries with estimated 50 per cent or more illiteracy and less than 1 million adult illiterates	54	15-16	2
C. Countries with estimated less than 50 per cent illiteracy and 1 million or more adult illiterates	20	55-65	9
D. Countries with estimated less than 50 per cent illiteracy and less than 1 million adult illiterates	81	8-9	1
WORLD TOTAL	198	690-720	100

Cont'd on next page

700,000,000 ILLITERATES *(Continued)*

THE GEOGRAPHY OF IGNORANCE

The world-wide scope of the problem is further seen from figures showing the estimated size of population and extent of illiteracy for each continent and geographical region. In Table 2, these regions are defined as in the United Nations *Demographic Yearbook*, with the exception that the U.S.S.R. is included here with Europe and not shown as a separate region.

The estimated extent of adult illiteracy in different parts of the world as of 1950, is shown on the map published on pages 18-19. It should be remembered that, in certain countries at least, great progress has been made in the last few years in reducing adult illiteracy, and in such cases the map indications are not up to date.

Table 2. — Estimated population and extent of illiteracy in the world, around 1950, by continents and regions

Continent and region	Estimated population		Estimated extent of adult illiteracy.	Estimated number of adult illiterates
	Total (all ages)	Adult (15 years old and over)		
	(millions)		(per cent)	(millions)
AFRICA	198	120	80-85	98-104
Northern Africa	65	40	85-90	34-36
Tropical and Southern Africa	134	80	80-85	64-68
AMERICA	330	223	20-21	45-47
Northern America	168	126	3-4	4-5
Middle America	51	30	40-42	12-13
South America	111	67	42-44	28-29
ASIA	1,376	830	60-65	510-540
South West Asia	62	37	75-80	28-30
South Central Asia	466	287	80-85	230-240
South East Asia	171	102	65-70	68-72
East Asia	677	404	45-50	180-200
EUROPE (inc. U.S.S.R.)	579	405	7-9	28-36
Northern and Western Europe	133	102	1-2	1-2
Central Europe	128	96	2-3	2-3
Southern Europe	131	95	20-21	19-20
OCEANIA	13	9	10-11	1
WORLD TOTAL	2,496	1,587	43-45	690-720

Within the same countries, there are often striking differences in the extent of illiteracy between the urban and rural areas, the male and female populations, the younger and older generations, and among various population groups distinguished by ethnic origin. These differences usually point to uneven development of educational opportunities within a country, and the need for special attention to the education of the under-privileged groups.

Almost invariably, higher illiteracy rates are found among the rural populations as compared with the urban populations of the same country. For example, in Brazil (1950), with a total illiteracy rate of 51 per cent, the rural population was 67 per cent illiterate as compared with 22 per cent for the urban population and 39 per cent for the suburban. In El Salvador (1950), with a total illiteracy rate of 61 per cent, the rates for the urban and rural populations were 35 and 77 per cent respectively. In Venezuela (1950), the urban population had an illiteracy rate of 30 per cent while the rural population was 72 per cent illiterate; and in Panama (1950), the rural population had an illiteracy rate of 43 per cent as compared with 7 per cent in the urban areas. Even in the U.S.A. (1952), the illiteracy rate for the rural farm population was 5.7 per cent, while the urban and rural non-farm populations had only about 2 per cent illiteracy.

The female population generally has a higher illiteracy rate than the male population, particularly in those countries with medium to high illiteracy rates. The following are some examples of large (more than 20 per cent) differences between the male and female illiteracy rates.

Male, female illiteracy compared

	Male	*Female*
Malaya (1947)	43 per cent	84 per cent
Thailand (1947)	31 per cent	64 per cent
Turkey (1950)	52 per cent	83 per cent
Greece (1951)	12 per cent	39 per cent
Yugoslavia (1953)	15 per cent	38 per cent
Ceylon (1953)	24 per cent	46 per cent
Egypt (1947)	69 per cent	91 per cent
India (1951)	71 per cent	92 per cent

There are, however, a few examples of countries where the female population has a lower illiteracy rate than the male. For instance, in Cuba (1953), the male illiteracy rate was 24 per cent as compared with 20 per cent for the female population. In Western Samoa (1951), there were only 6 per cent illiterates among the women but 23 per cent among the men. Other examples of this kind are found in Bermuda (1950), with 4 per cent male illiteracy and only 2 per cent female illiteracy; and in the U.S.A. (1952) where the illiteracy rate among men in the rural farm areas was 7.1 per cent as compared with a rate of 4.1 per cent among women in the same areas.

Obviously the older age groups of the population in any country are apt to have higher illiteracy rates than the younger groups, especially where universal primary education has been introduced only recently. The following figures from the Philippines census of 1948 are fairly typical :

Illiteracy by age groups in the Philippines

Age group	*Male illiteracy*	*Female illiteracy*
	%	%
10-14 years	34	32
15-19 years	24	25
20-24 years	25	31
25-34 years	32	39
35-44 years	37	49
45-54 years	48	65
55-64 years	59	76
65 years and over	72	84

It is quite common to find differential illiteracy rates among the various ethnic groups of a population. Apart from such examples as the U.S.A. (1952), where the illiteracy rates for the white and non-white populations were 1.8 and 10.2 per cent respectively, and the Union of South Africa (1946), where the African population was 72 per cent illiterate whereas the white population had less than 2 per cent illiteracy, marked ethnic differences are reported in the censuses of other countries. These include Barbados (1946), Bermuda (1950), British Guiana (1946), British Honduras (1946),

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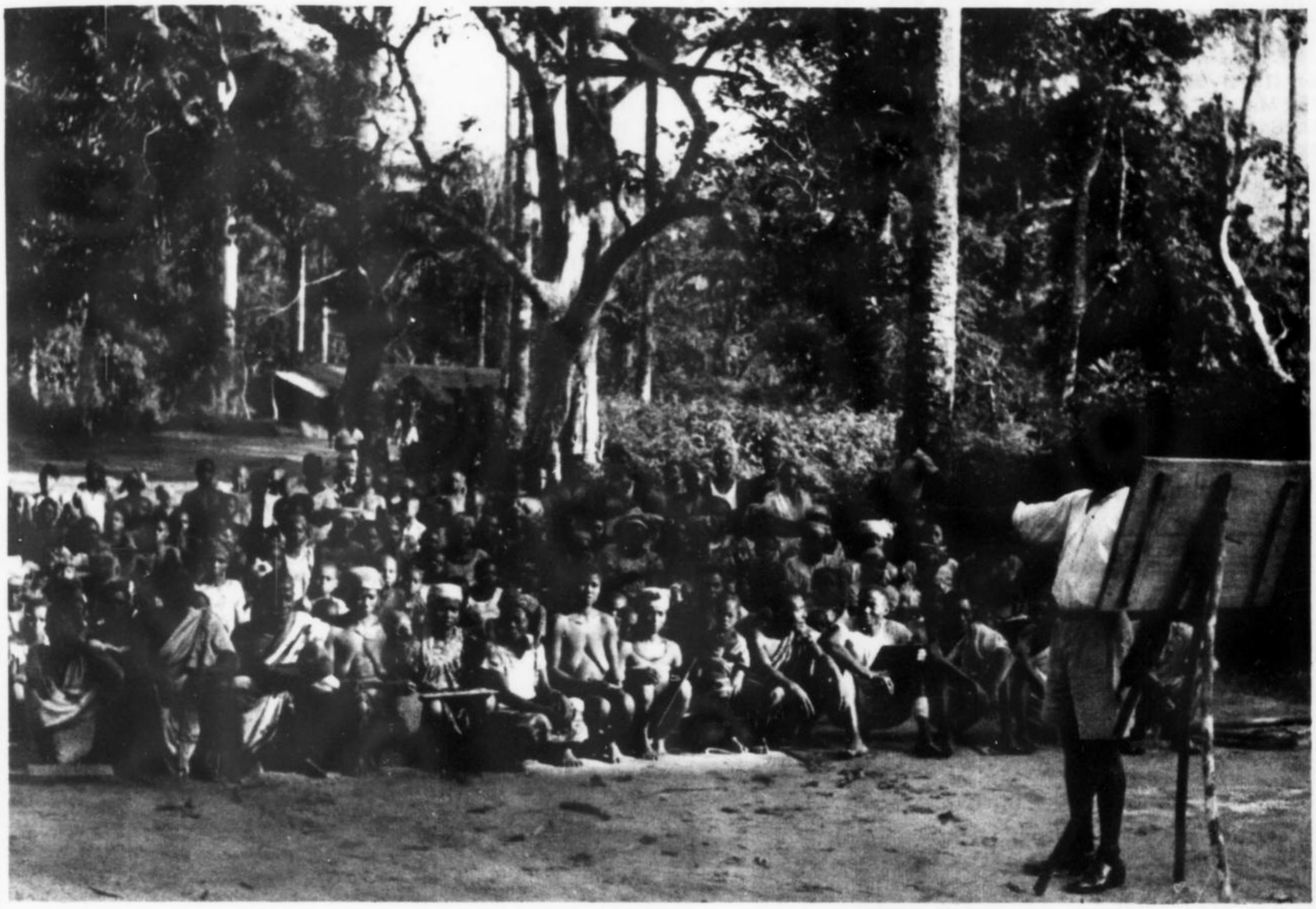

COI

WALL OF ILLITERACY is gradually being pushed back in Africa by devoted men and women such as this teacher instructing an open-air class in Southern Nigeria. Grown-ups and children come here to learn to read and write in Ibo, the local language, during a mass education campaign.

R. C. Ariel

S. S. Benegal

GATEWAY TO LITERACY VILLAGE, a non-governmental educational institution, at Lucknow in India, spells new hope for all who enter it. Operated by the India Literacy Board, it trains workers who take classes around flickering oil lamps in village homes. India's drive for literacy was recently encouraged by Indian statesman Krishna Menon, who declared: "Every citizen who cannot read or write is a blot on the other man who can."

700,000,000 ILLITERATES *(Continued)*

THE REAL THREAT: INCREASING POPULATION

Ceylon (1946), Fiji (1946), Leeward and Windward Islands (1946), Malaya (1947), Mauritius (1952), North Borneo (1951), Sarawak and Brunei (1947), Trinidad and Tobago (1946).

There is naturally a direct relationship between the growth of primary school enrolment and the reduction of adult illiteracy in a given country over a period of time. If all children of school age in a country attended school for a sufficient length of time, there would of course eventually be few adult illiterates in that country. On the other hand, as long as a substantial proportion of the school-age children are left out of school, the problem of illiteracy can never be successfully resolved by recourse only to emergency measures such as the organization of literacy classes for adults.

© Paul Almasy

HANDWRITING ON THE WALL in this Bolivian country schoolroom spells the eventual defeat of the army of illiteracy... for its recruits are adults who never had a chance to go to school. In Bolivia, the Government is concentrating on improving education offered by rural schools in order to give the country's new generation a head start in the march to literacy. Because of the urgency of the illiteracy problem in Latin America, Unesco has launched a ten-year major project to extend primary education on the continent. Bolivia is a member of the committee which will supervise the application of the project.

For example, in France, where primary education became free in 1881 and compulsory in 1882, the illiteracy rate rapidly declined from 16.5 per cent in 1901 to 3.3 per cent in 1946. In the U.S.A., compulsory education laws had been introduced in all the states by 1918; the illiteracy rate is now down to 2.5 per cent for the country as a whole. In Italy, compulsory education began in 1859 but did not come into full operation until after 1904; the illiteracy rate was nearly 50 per cent in 1901 but had dropped to 14 per cent in 1951. However, in Brazil where there is not yet universal compulsory education, the illiteracy rate had declined only from 65 per cent to 51 per cent between 1900 and 1950.

Countries which had less than 40 per cent of their children in primary schools around 1930 all had 50 per cent or more adult illiterates in 1950. Almost all countries with less than 20 per cent adult illiteracy in 1950 had maintained high enrolment ratios (60 per cent or more) at least since 1930. Thus it may be stated as a basic principle that the extension and improvement of primary education is the best single method for the elimination of illiteracy in any country.

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HISTORICAL evidence and current comparisons lead to the conclusion that low levels of illiteracy in the population are most often associated with an advanced stage of industrialization. In England and Wales, the decline of agriculturalism and of illiteracy both began prior to the nineteenth century. By the beginning of this century, only 12 per cent of the economically active male population were engaged in agriculture, and only about 3 per cent of brides and grooms were signing the marriage register by mark. In Belgium, between 1866 and 1947, the proportion of male active population engaged in agriculture fell from 40 to 14 per cent, and the illiteracy rate dropped from 40 to 3 per cent. In France, since 1872, the decline of agriculture has proceeded less rapidly than in England or Belgium, yet the illiteracy rate has been reduced from 33 per cent to about 3 per cent.

While the picture emerging from the Unesco study on world illiteracy is on the whole encouraging—showing trends of progress in all parts of the world—it gives no grounds for complacency on the part of the world's educational workers. Unless concerted efforts are made continuously to bring still more of the world's children into the schools to receive the rudiments of education and to giving illiterate persons a chance to learn the basic skills of reading and writing, the inevitable pressure of population growth already experienced in many countries may offset all the educational progress achieved and leave just as many illiterate adults in the world of tomorrow, if it does not actually increase their numbers. At any rate, no one can be indifferent to the plight of 700 million people—more than two-fifths of the world's adult population—who are forever handicapped in modern society because they are unable to communicate with their fellows by the written word.

Having assessed the magnitude of the task—which remains one of the principal objectives of Unesco's educational programme—we can only hope that the educators, administrators and policy-makers of all countries will rally to the effort in assuring for every man, woman and child the right to education promised to him in the Universal Declaration of Human Rights, whose Article 26, states in part :

"Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory..."

Photos © Paul Almasy

WOMEN'S LITERACY CLASS organized by "The Daughters of the Nile", an Egyptian feminist movement, at Boulak, Cairo, is typical of efforts now being made to give women a more active role in the life of Arab countries. Illiteracy is high in Egypt (about ten million adults or nearly eight out of ten, according to 1950 figures) and much higher for women than for men. A 1947 census showed that the overall figure was 80.1 per cent and that the male and female illiteracy percentages were respectively 68.5 and 91.3. Since 1950, following government campaigns, the proportion of illiterates has dropped and educational opportunities for women have increased.

WHAT IS AN 'ILLITERATE'?

ANY efforts to find out how much illiteracy exists in the world and where it is to be found immediately come up against the problem of terminology. Who is "literate"? The concept of literacy is very flexible. It can be stretched to cover all levels of ability, from the absolute minimum—to write one's own name, for example—to an undetermined maximum.

So far there has been no general agreement on a definition of "literacy" or "illiteracy" applicable to all countries and territories. In fact the United Nations and UNESCO have repeatedly pointed out in their studies on the question the differences that exist in national criteria of illiteracy.

The difficulty of arriving at a satisfactory common definition is due only partly to the divergence of national practices and traditions. A more basic cause is the difficulty of reconciling the various concepts of literacy. These range from the mere ability to recognize and to write down certain words (or letters of the alphabet—hence "analphabetism") to being able to communicate adequately in writing with other people and from here to the much higher level of competence necessary to understand, to appreciate and even to produce, literary works.

Most of the national statistics on literacy and illiteracy are derived from population censuses. Armed with a census schedule which includes such questions as "Can you read and write?" or "Can you read?" and "Can you write?", the census investigator gets an answer from the person he is enumerating (or from someone else answering for that person) and enters it on his record. It is hardly possible for him to test the validity of the answer by a detailed examination. In most census operations, therefore, the criterion of literacy adopted has to be more or less a minimum one.

On the other hand, a special survey (probably using a sampling method) on the literacy of a population could be based on an objective test, which would involve not only word recognition, but also comprehension of a sentence or passage, and the ability, not only to write from dictation, but also to compose a statement in answer to a question or to some verbal instructions. In such cases, the criterion of literacy could be related to a so-called "functional" level, or to a range of abilities from the minimum to a highly functional level.

In 1948 the United Nations recommended that literacy should be defined (for purposes of international comparisons) as "ability both to read and to write a simple message in any one language."

While this definition is undoubtedly suitable for census purposes, it does not fully meet the needs of educational surveys. It was therefore expanded by a Committee of Experts on Standardization of Educational Statistics, convened by UNESCO in 1951. This committee recommended the following definitions of "literacy" and "semi-literacy":

A person is considered *literate*, who can both read with understanding and write a short, simple statement on his everyday life.

A person is considered *semi-literate*, who can read with understanding, but not write, a short simple statement on his everyday life.

Until international recommendations on the measurement of illiteracy are generally adopted by governments, statistical data collected and published by them will continue to be based on different criteria —a fact which limits the international comparability of such statistics.

THE LARGEST LITERACY CAMPAIGN IN HISTORY

by Serafima Liubimova

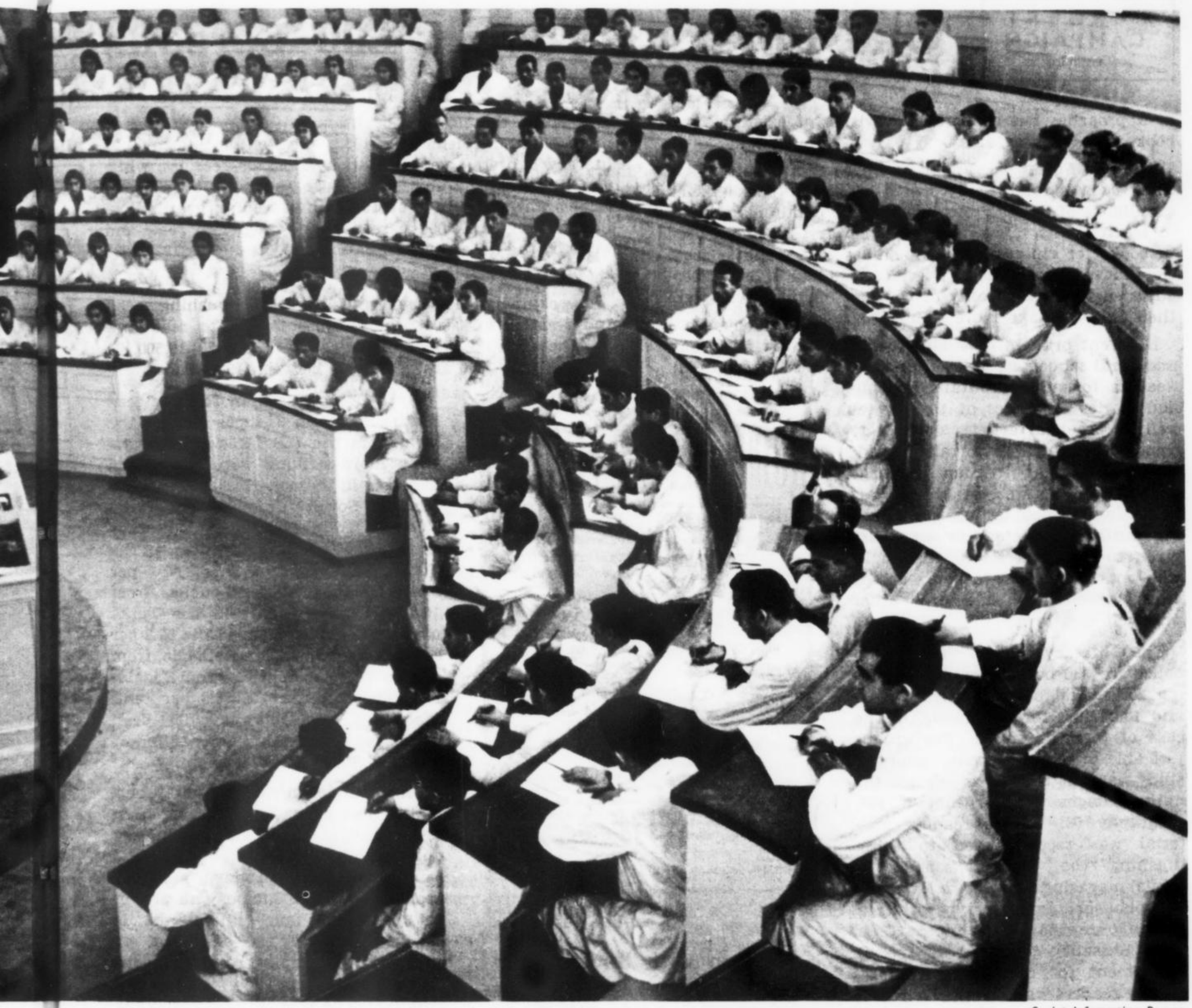
At the start of this century 75% of the Russian people were illiterate. To have banished illiteracy from its vast territories within the space of 40 years is an achievement of which the Soviet Government is rightly proud. Today more than 2,000,000 students attend institutes of

DURING the past 40 years, the Soviet Union has been the scene of the largest literacy campaign carried on in all history. In 1917, Russia was a poor, backward country. She was behind in many respects, but worst of all in the matter of literacy. A census taken in 1897 revealed that 76 per cent of the population above the age of nine was unable to read or write. Illiteracy among women was three times as high as that among men. Literacy varied sharply with nationality and region. V.I. Lenin wrote in 1913: "No other country in Europe remains as wild as Russia, the masses of which have been so despoiled of education, light and knowledge."

As long as illiteracy and ignorance prevailed, the people could not be expected to participate effectively in the building of a new life, in restoring the nation's economy, developing science and raising technical standards. That is why the wiping out of illiteracy became such a pressing problem after the October Revolution. A Soviet Government decision of December 26, 1919 "On the Liquidation of Illiteracy Among the Population..." started a country-wide literacy campaign to teach the three R's to the entire illiterate population from 8 to 50 years of age.

During the first years of the Revolution (1917-1920) the task of fighting illiteracy was no easy matter. The civil war was in progress, but even then an important step was taken to eliminate illiteracy. The army became a huge school for the many millions of illiterate peasants in uniform. Compulsory schooling was introduced in every company, squadron, battery and detachment in September 1919. When the war ended, the demobilized soldiers returned to their native villages as literate men and assumed the initiative in spreading knowledge in the countryside.

From 1920, the fight against illiteracy began to be waged on a tremendous scale. Government institutions, trade unions, youth organizations, and various voluntary societies, such as the "Down with Illiteracy" organization, all engaged in the work of teaching millions of workers



Soviet Information Bureau

higher education compared with 127,000 in 1914. Left, the early years of the drive for literacy—an elementary class for women at Tashkent, capital of Uzbekistan, a Soviet Republic in Central Asia, in 1925. Above, a present-day anatomy class at the Medical Institute in Baku.

and peasants to read and write. An all-Russian Emergency Commission for the Abolition of Illiteracy was set up by the People's Commissariat of Education (now the Ministry of Education) in July 1920 to co-ordinate the efforts of all the different bodies combating illiteracy.

Despite its meagre resources, the war-ravaged country allocated thousands of tons of paper for notebooks and textbooks, firewood and kerosene for heating schools, warm clothing and boots for travelling instructors.

Literacy students had their workday cut by two hours without loss of pay. Special anti-illiteracy departments were set up under town and village auspices. Educational authorities were allowed to use not only the schools but other government and public premises to teach illiterates.

Teachers, doctors, agronomists, librarians, engineers, government clerks and all college and senior high school students were enlisted in the fight. Every literate person felt it his patriotic duty to join in the growing national drive against illiteracy.

Illiteracy fighters displayed the greatest ingenuity in overcoming obstacles. Where ink was lacking they made it from beetroot; if there were no notebooks they wrote on wrapping paper or boards.

Local conditions determined the manner in which the work was carried on. Instruction was conducted in the language native to the student. In the East, where the ancient customs humiliating to the women continued to hold sway in the early years of Soviet power, separate schools were established for women. Nomads driving their cattle from one grazing ground to another had literacy schools follow in their wake. Special forms and methods of instruction were devised for transport workers, lumbermen and others engaged in seasonal occupations. Nor were mothers forgotten. Children's rooms were provided where mothers could leave their children while studying.

Cont'd on next page

The vast scale on which the work was conducted necessitated not only a variety

LARGEST CAMPAIGN
(Continued)

One library to every 500 persons

of approaches but a thorough revision of existing text-books and teaching aids.

The first Soviet primer for grown-ups was published in 1918. It was followed by scores of similar books issued in millions of copies. Attempts to use children's primers to teach adults failed. The elementary sentences used in books for children brought smiles and laughter from the grown-up students, so special books had to be written, adjusted to the mentality of the new "pupils", who were then able to make more rapid progress.

Different primers were also found necessary for urban and rural schools as well as for the schools in the North. Readers for adults contained poems and stories on topics of the day as well as practical articles on how to combat drought, how to take care of gardens, etc. At Russian language classes, students were taught the art of writing business letters. In teaching arithmetic attention was also given to the interests of the pupils who were shown how to figure up the crops, production time and other practical measures.

The literacy school curriculum called for 330 hours of study, including 200 hours for the native tongue and 130 hours for arithmetic, in the case of total illiterates. For groups just able to read and write, hours of study were distributed as follows: the native tongue 145, arithmetic 125, geography 60. Simple reading material was recommended to those finishing the literacy schools. A special magazine, *Down with Illiteracy* was published in large type, while a peasant newspaper *Bednota* (The Poor Peasant) produced a special supplement for beginners. A series of easy readers was also published.

Every effort was made by the State and public organizations to develop a wide network of libraries, clubs and educational institutions to meet the growing cultural requirements of the newly-taught people; the publishing business was also extended.

Since most of those engaged in teaching illiterates were not professional teachers, it was highly important to provide them with guidance and proper methods. School teachers and instructors of the teachers' training colleges proved very helpful in this respect.

The public schools served as teacher-guidance centres in the districts. They gave consultations, arranged conferences which permitted an exchange of experiences, and organized short-term courses. Advice and assistance were given to all applicants.

The People's Commissariat of Education published various teaching aids and magazines, recorded local experience, and sent trained technicians to the provinces, to provide advice in the field.

By 1926, the number of literates in the country had more than doubled. In 1932, the "cultural army" of literacy fighters comprised about 1,200,000 recruits, while the "Down with Illiteracy" society had more than 50,000 local branches with a membership exceeding five million. Upwards of 32,000,000 persons were taught to read and write by the illiteracy elimination schools during 1929-1932 alone.

The campaign had been built up with astonishing speed and results: 1,300,000 persons were taught to read and write between 1927-28; 2,700,000 between 1928-29; 10,500,000 between 1929-1930 and 22,000,000 between 1930-31.

ДОЛОЙ НЕГРАМОТНОСТЬ!

№ 35. 1924 г.

МАТЕРИАЛ ДЛЯ ЧТЕНИЯ ПОСЛЕ БУКВАРЯ.

Всероссийская Чрезвычайная Комиссия по ликвидации безграмотности при Главполитпросвете

Я кую, ты пашешь поле.
Оба мы трудом живем.
Оба рвемся к светлой доле.
С бою каждый шаг берем.

Я сверлю земные недра.
Добываю сталь и медь.
Награжу тебя я щедро
За твои труды и снедь.

Мы с тобой родные братья:
Я—рабочий, ты—мужик.
Наши крепкие объятья
Смерть и гибель для владык!

Н. Тихонов.

„При условии громадного разорения страны мы боремся за самое трудное: за фундамент действительно социалистической экономики — за правильный товарообмен между промышленностью и земледелием".

В. И. Ленин.

Союз рабочих и крестьян непобедим!

Soviet Information Bureau

'Down with Illiteracy'

It was from 1920 onwards that the fight against illiteracy began to be waged on a tremendous scale in Russia. Government institutions, trade unions, youth organizations and many voluntary societies all joined in the work of teaching millions of workers and peasants to read and write. Teachers, doctors, agronomists, librarians, engineers, government clerks and all college and senior high school students were enlisted in the fight. One of the leading groups in the campaign, the "Down with Illiteracy" organization, published a special magazine, printed in large type, a cover of which—No 35 of 1924—is reproduced above.

By 1939, no less than 95.1 per cent of the men and 83.4 per cent of the women in the U.S.S.R. were literate. Even more striking were the results achieved in the non-Russian republics of the Soviet Union. During the 13 years from 1926 to 1939, literacy showed the following advances: in the Tadjik Republic, from 3.7 to 71.7 per cent; in the Uzbek Republic, from 10.6 to 67.8 per cent; in the Turkmenian Republic, from 12.5 to 67.2 per cent; in the Kirghizian Republic, from 15.1 to 70.0 per cent; in the Kazakh Republic, from 22.8 to 76.3 per cent. Since the war, illiteracy has been wiped out completely in the Union of Socialist Soviet Republics.

Universal elementary and junior high-school education has long been established in the Soviet Union and universal high-school education is being introduced. Today, 50,400,000 people in the U.S.S.R., or one person out of every four inhabitants, is engaged in study of one kind or another. The number of schools, colleges and libraries is steadily growing. The number of libraries has increased by 147,400 during the past 10 years and now exceeds 400,000 so that there is today an average of one library to every 500 citizens in the Soviet Union.

The first step in this gigantic advance of culture was the arduous struggle against illiteracy. Many thousands of Soviet people, for whom the illiteracy elimination schools were the first step to education, remember it with a feeling of gratitude.

Further information on this subject is to be found in a booklet "Forty Years of Public Education in the U.S.S.R.", by M. Deineko, published in Moscow in 1957 *by the Foreign Languages Publishing House.*

Serafima Liubimova *began to work in schools for adults in* 1917, *first in Moscow and later in Central Asia. She has been active in promoting public education in Moscow and other Soviet towns. At the end of the* 1930's *she was a leading official of the Adult School Department.*

AN ILLITERATE IN PARIS

In countries where free and compulsory education has been applied for generations, illiteracy is no national problem. Yet in all countries, even the most advanced, a small residue remains of adults who, for one reason or another, have never learned to read or write. At mid-century, the majority of the countries of northern and western Europe had illiteracy rates ranging from one to three per cent. However, statistical trends also show that with each passing decade the number of illiterates in these countries is steadily dropping. Thus, the latest (1946) survey carried out in France revealed an illiteracy rate of 3.3 % but also showed that between 1901 and 1946 illiteracy had decreased each ten years by 30 per cent. Assuming the same rate of progress since 1946 as in the past, illiteracy in France today could be estimated at not more than two per cent. But what is the position of the few who have somehow slipped through the network of compulsory education? What does it mean to be an adult illiterate in a society where life is organized on the assumption that everybody can read and write? Recently a French journalist decided to find out and finally managed to discover a middle-aged woman factory worker living at Romainville, a suburb of Paris, who could neither read nor write. The answers she gives in the interview published below reveal the poignant drama of an illiterate person living in a modern world capital and the tragedy of being cut off from the written communication we take so much for granted.

"ARE there any words which you can recognize even though you cannot read them?"

"Yes, three words. The names of the two Underground stations on the line I take every day: —'Lilas' and 'Chatelet'— and my maiden name."

"Could you pick them out from a group of other words?"

"I could recognize them from about a dozen others, I think."

"What do they look like to you... like drawings?"

"Yes, like pictures, if you want. 'Lilas' is a tall word—it's almost as tall as it is wide—and it's pretty. The word 'Chatelet' is too long, and it's not so pretty. When you see it, you know it's not the same as the word 'Lilas'."

"When you tried to learn to read, did it seem difficult to you?"

"You can't imagine what it's like. It's terrible."

"Can you give me an idea of what you mean exactly?"

"I don't really know. Maybe because everything is so... so small. I'm sorry, I'm not very good at explaining things."

"It must be quite a difficult thing for you to live in a city like Paris and to get around from one place to another without being able to read."

"Oh, if you've got a tongue in your head you can get anywhere you want."

"How do you manage exactly?"

"Well, I do a lot of asking. And then I use my head. It's funny how quick you pick up things and remember what you see. Much quicker than other people. It's like a blind person. There are places where you know where you are. Then, I ask people."

"Do you have to stop and ask your way often?"

"Oh, about ten times when I come into Paris from Romainville on an errand or something. There are all those Underground station names. They mix you up. You have to take another train back, ask again... and then there are the names of the streets, the shop names and the numbers."

"The numbers?"

"I can't read them. When I get my pay or go shopping, I can count the figures in my head, but I can't read them."

"Don't you ever tell people that you can't read?"

"No, never! I always say that I forgot my glasses."

"But there must be times when you can't avoid it?"

"Yes, sometimes. When they ask me to sign my name at the factory or in the Town Hall. But I go red when I have to say it. If you were in my shoes you'd know what I mean."

"How do you manage in your job?"

"When I'm being hired, I keep it to myself. And I always hope to get away with it. It works most of the time, except when there are time-slips to fill in. The rest of the time I make believe I can read."

"Everywhere?"

"Yes, everywhere. In the factory, in the shops I look at the labels and the scales and make believe that I'm reading them. I'm so afraid that people are cheating me, too. I'm always suspicious."

"Does it bother you in your work?"

"No, I'm a good worker. I've got to be more careful than the others. I use my head and I'm careful. I don't have any trouble there."

"What about your shopping for food and things?"

"I know all the colours of all the brands I use. When I want to change a brand I ask one of my friends to come with me. After that I remember the colours of the new brand. You've got to have a good memory if you're like me."

"What do you do for amusement? Do you like the cinema?"

"No, I don't. It's too fast and I don't understand the way they talk. The pictures always start with a lot of writing. People read letters and you see it on the screen. Then they look sad or happy and I don't know why. But I do go to the theatre."

"Why the theatre?"

"You've got time to listen. They tell you everything they're doing. There's no writing. They talk slow. I understand better."

"Any other amusements?"

"I like to go to the country and I like to watch sports. You know I'm no more stupid than anybody else, but when you can't read you're like a child."

"When certain people talk—take the radio for instance—does it bother you in any way?"

"Yes, it does. It's like the pictures. They're always using words they find in books. I'm not used to hearing these people and the words they use. Somebody has to explain it to me all over again so as I understand.

"Do you ever forget that you can't read?"

"No, I can't. As soon as I walk out of the house I think about it all the time. It tires you out and makes you waste time. You never want people to notice it... that's what you think about all the time. You're always afraid."

"Afraid?"

"I can't explain it. I think people must be able to see it. You can't hide it."

Interview by Marguerite Duras. Reproduced by permission of France-Observateur, *Paris.*

MOROCCO ANSWERS A ROYAL CALL TO THE CLASSROOM

WHEREVER you travel in Morocco you come across a poster showing the country's ruler, King Mohammed V, his arms outstretched, calling the people to attend literacy classes and, below, a small schoolhouse to which men, women and children are flocking. The poster, displayed in even the tiniest villages, launched Morocco's first national literacy campaign after it had been heralded by the distribution of three million leaflets and announcements through loudspeakers and loudspeaker vans.

This national literacy campaign was organized by the Moroccan League for Fundamental Education and Literacy Work, founded in 1956, and to whose appeal, teachers from State and private schools, as well as students, tradespeople, workers and craftsmen responded with enthusiasm.

The League began its work by producing a literacy handbook, giving the rudiments of reading, writing and arithmetic. The results of this handbook exceeded all expectations, and soon, two more editions had to be printed. When the campaign opened on April 16, 1956, 350,000 men and women applied for enrolment in the schools, and nearly 10,000 men and women teachers had to be recruited.

The thirst for knowledge and the general enthusiasm were such that everywhere groups of people were to be seen reading through their lessons together—in shops, booths, offices, workshops and even at street corners. In Casablanca grown-ups often tried in vain to force their way into the already overcrowded classrooms. On its side, the League put everything it could into the campaign and even arranged classes in prisons and for patients in hospitals.

A few months after the end of the 1956 literacy campaign, the Fundamental Education Department instituted a term of revision to allow new literates to consolidate the knowledge they had gained. Now, the Department proposes to start a fresh campaign with a second series of courses to bring all the new literates up to the level of the Primary Education Certificate.

In the early days of the first national campaign, the inexperienced voluntary teachers ran into various kinds of difficulties which the League helped them to overcome by organizing guidance courses in the schools or over the radio. At a later stage other problems arose concerning the provision of reading materials for adults at a very elementary stage of learning. The League therefore decided to bring out a special weekly publication written in a simple, easily comprehensible style, which it named *Manar El Maghrib* (Lighthouse of Morocco).

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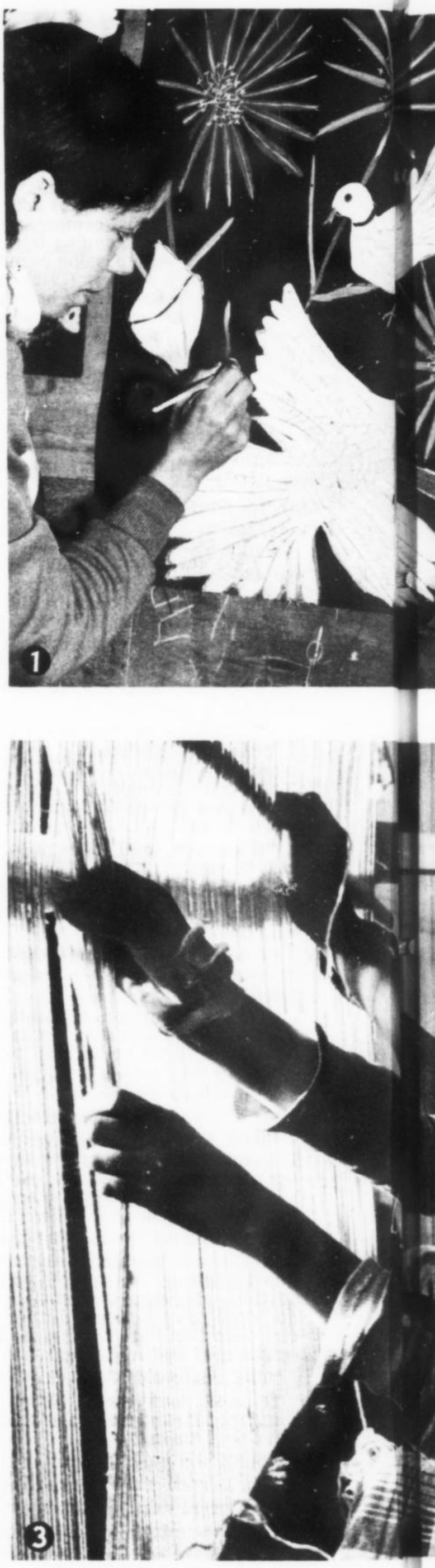
IT is also in Morocco that a new method for printing Arabic has been developed which will bring newspapers and books within the range of thousands of newly-literate men and women. The inventor is Mr. Ahmed Lakhdar, General Secretary of Morocco's National Commission for UNESCO and head of the Fundamental Education Section of the Ministry of Education.

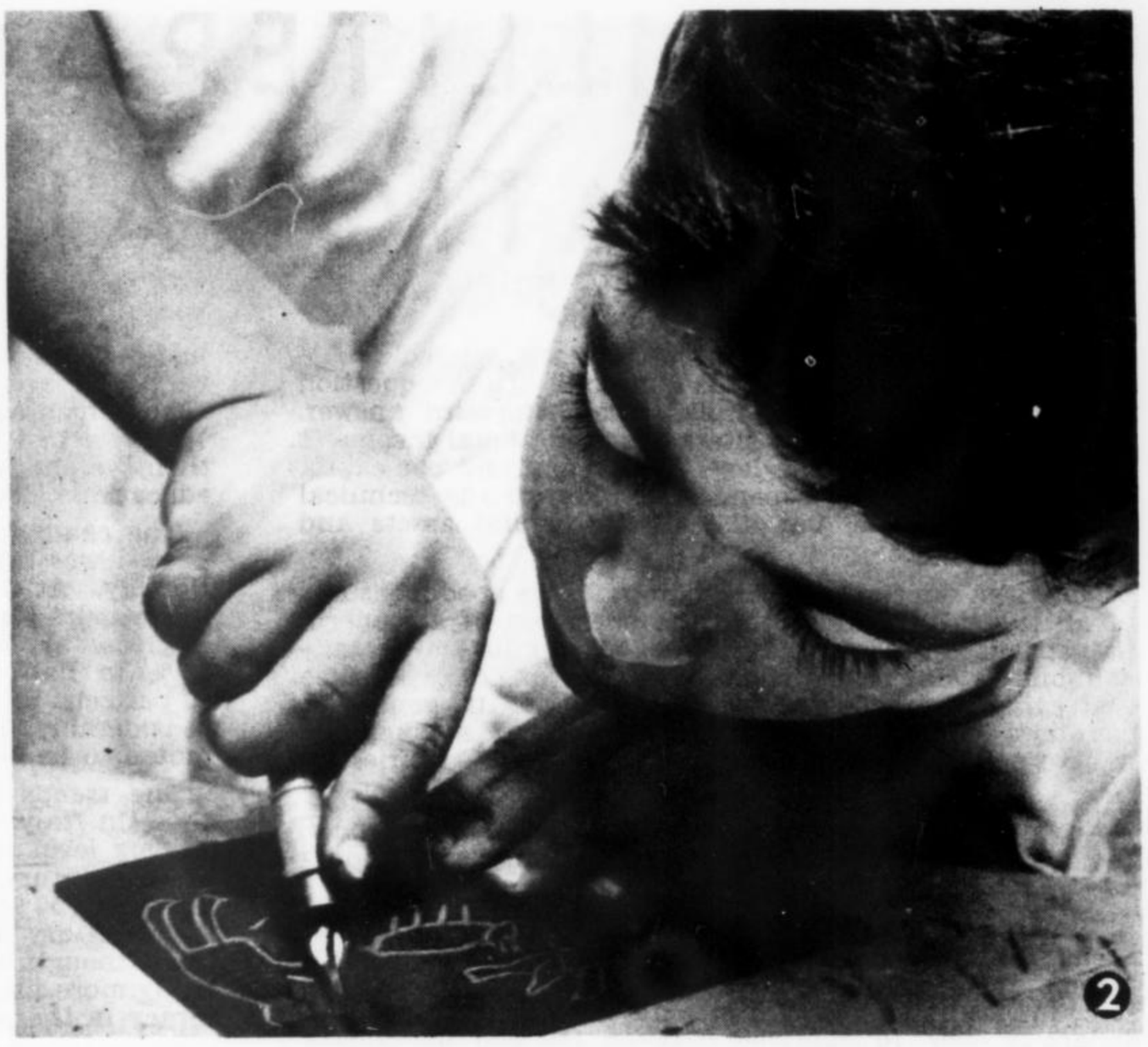
The problem was this: although the Arabic alphabet contains 30 letters, some 475 to 800 typesets are needed for printing texts with the vowels. Mr. Lakhdar has managed to reduce the number of typesets needed for printing Arabic with vowels to a basic 87, thus making it possible to adapt the system to standard typewriters and type-setting machines. When applied to the printing of newspapers and periodicals, the new system will provide an immense stimulus, by encouraging new readers to continue their studies, and persuading illiterate adults to join in literacy campaigns. Mr. Lakhdar's system has been adopted by the Moroccan Government, and it was studied with interest by National Commissions for Unesco from eight Arab States which met in Fez, Morocco, in February.

The Moroccan League has decided to extend its field of action and to set up fundamental education centres all over the country. It feels that its work will not really be completed nor its aims achieved until illiteracy is eradicated and the Moroccan people as a whole have realized their civic responsibilities.

The measure of this task can be seen in figures given in the UNESCO study, *World Illiteracy at Mid-Century:* Around 1950, out of Morocco's population of 8,800,000, 5,100,000 were adults aged 15 and over. Between 85% and 90% of these were illiterate—a total of between 4,300,000 and 4,600,000 people unable to read or write. Despite the progress made since then, it is certain that the proportion of adult illiterates in Morocco is still extremely high.



ENRICHING EDUCATION in Morocco is the work of the "Service of Youth and Sports". It organizes courses in subjects not sufficiently covered by normal "schooling" and makes



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Photos © Gerda Bohm, Rabat

chem available to educationally "underprivileged" sections of the community. Photos show activities in centres created by the Youth Service in all parts of Morocco. (1) Young people express themselves and develop artistic talent in drawing and painting classes at Rabat. (2) Lino-engraving calls for a sure hand and plenty of concentration. (3) One of Morocco's traditional crafts: carpet-weaving in a girls' centre at the "Bidonville" (shanty town) of Casablanca. (4) Captivated audience watches a young actor at the Salé centre.

ILLITERACY AND NATIONAL INCOME

How is a country's level of literacy related to its wealth and prosperity as a nation? To this question there can be no simple, straightforward answer. The relationship between literacy and national income is complicated, because the level of national and per capita income in a country depends not only on the technical skills of its people, but also on its capital assets and natural resources.

Moreover, figures for literacy are not very good measures of all the skills that go into the operation of a modern, industrialized economy. Some of these skills and technical abilities may be the result of generations of experience and cannot be reflected by literacy rates. In general a country's capital assets are created through a long, formative process often lasting decades or even centuries.

We cannot then assume that a close relationship exists between literacy rates and the level of national income, though there are, nevertheless, sound reasons for considering that they are to some extent related.

The United Nations' *Preliminary Report on the World Social Situation* includes a table of the 1950 *per capita* income of 75 countries and territories. This shows that 25 countries had *per capita* incomes equivalent to 300 U.S. dollars or over, 10 countries between 150 and 300 dollars and that 40 countries were below the 150 dollar level. By dividing the countries into two categories at the 300 dollars *per capita* income level and separating the adult illiteracy rates of the countries at three levels—high (50 per cent or more), medium (20 to 49 per cent) and low (less than 20 per cent)—we arrive at some idea of the association between these two factors.

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TAKING figures for adult illiteracy rates and *per capita* incomes of 41 countries in 1950 we find that 12 of them which had high illiteracy rates also had relatively low *per capita* income. Of 16 countries with low illiteracy rates, all except Japan had relatively high *per capita* income. As regards the 13 other countries, with illiteracy rates between 20 and 49 per cent, all except two—Puerto Rico and Venezuela—had *per capita* incomes of less than 300 dollars.

From these general figures let us go on to examine the development of *per capita* income in four specific countries, in relation to the level and trend of their illiteracy rates, starting with the United States of America. Here the illiteracy rate declined from 20 per cent in 1870 to 10.7 per cent in 1900 and continued to fall after the beginning of the century until by 1950 it had dropped to 3.2 per cent.

Expressed in terms of the 1929 dollar, the *per capita* gross national product had increased from $268 in the period around 1870 to $542 in the period around 1900. Thereafter it continued to increase (except during the depression years around 1930) until it reached a high level of about $1,200 in 1953. In other words, the *per capita* income more than doubled in the 50 years after 1900.

At the same time it will be seen that the United States, around 1870, started at a relatively high level of literacy. While the country's rapid rise to prosperity was due to many factors, including the discovery of natural resources and the high annual rate of accruing capital, the evidence nevertheless shows a parallel development in the reduction of illiteracy and increased *per capita* income.

In Norway, the rate of increase of the gross annual product (in terms of 1938 prices) was greater than that of the United States—150 per cent, or from less than 1,000 kroner *per capita* at the start of the century to over 2,500 kroner in 1953. Data on illiteracy rates are not available for Norway, but the high proportion of children, aged from 7 to 14, attending school from at least 1875 justifies the assumption that the country had reached a very high level of literacy at the beginning of the century. (The percentage of school attendance was 84.3 per cent in 1875 and had risen to 91.4 per cent by 1940. Here again, then, we find an indication of the association between the educational level of a people and its productive capacity.

The example of Italy shows a rise in national income at a slower rate than that of either the United States or Norway. At the beginning of the century, the *per capita* income, in terms of 1938 prices, was around 2,300 lire. By 1954 this had increased to about 3,500 lire—a rise of 50 % in half a century. Italy's population was about 50 per cent illiterate in 1900, though the rate has declined considerably since. (Around 1950 adult illiteracy was estimated to be between 10 and 15 per cent.)

The trends in Spain have been somewhat similar to those in Italy. On the basis of 1929 prices, the *per capita* income level rose from about 850 pesetas near the start of the century to about 1,200 pesetas in 1953—something less than 50 % over a half century. Spain entered the 20th century with an illiteracy rate even higher than Italy, though today it may be considered among the relatively more literate nations with less than 20 per cent illiteracy in the population 10 years old and over as of 1950.

The educational development of a country is perhaps related to the distribution of income within it even more closely than to the level of *per capita* income. Where income is more concentrated in a small proportion of the population, education tends to be the privilege of the few, and a large part of the people will remain illiterate. On the other hand, as literacy skills and education in general become more widespread, the gap between the high-income and low-income groups will be reduced, and the nation's total income will become more evenly distributed. However, statistics on income distribution are only available for a few countries, and are hardly comparable between countries.

In the United Nations' report, already mentioned, the example is cited of four countries—Ceylon, El Salvador, Puerto Rico and Italy—where, around 1950, one-third or more of the total income was received by the richest tenth of the population. In five other countries—Canada, Denmark, Sweden, United Kingdom and the United States—the upper tenth accounted for less than one-third of the total income. It should be remarked that the countries in the first group all have higher illiteracy rates than those in the second group. Furthermore, in the United Kingdom and the United States, for example, the trend towards less concentration of income in the upper brackets, as compared with an earlier period, can already be seen.

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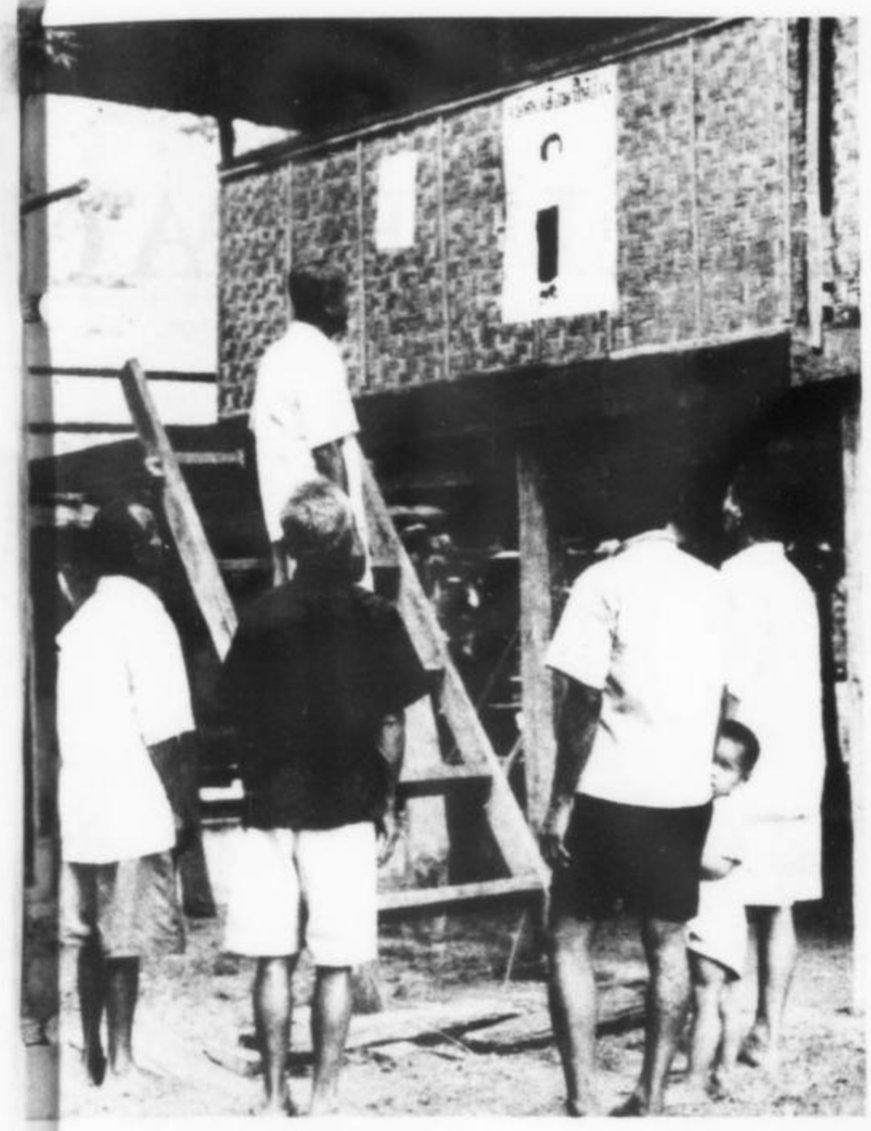
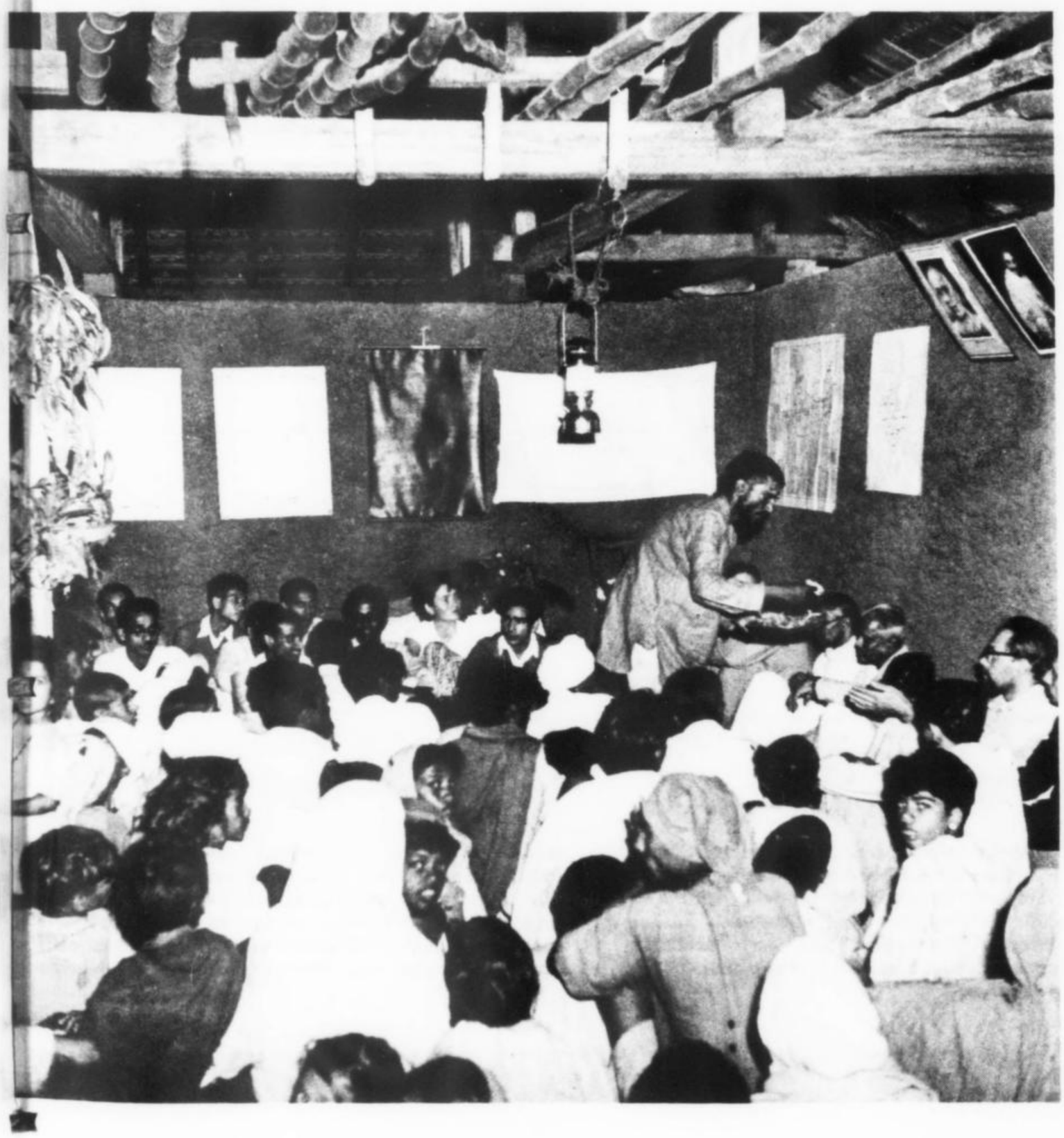
ANOTHER aspect to consider is the proportion of national income devoted to educational expenditure. A recent UNESCO study (*Public Expenditure on Education,* Paris, 1955) shows that total expenditure on education about 1950 by central and local governments varied from less than 1 per cent to more than 5 per cent of the national income of each country. If we separate the countries according to whether they spent more or less than 2 per cent of their national income on education, and relate them to their adult illiteracy rates, we find in general that those countries with high rates of adult illiteracy spent a small proportion of national income on education.

A study of the statistics available shows, however, that some countries with relatively low national income spent a relatively larger part of it on education. Of course, the absolute amounts of expenditure may still be very small in such countries, as compared with the educational expenditures of the more prosperous ones. Moreover, in the latter countries, many other items of government expenditure are also likely to be large, thus keeping down the percentage expressed by educational expenditure.



Photos Tufec

GOOD NEWS for readers is brought to a Thai village by a poster (above, left) announcing the arrival of book-boxes in the village. The travelling library which brings them is one of the most important arms of education in preventing literates from slipping back into illiteracy simply because they have nothing to read. Poster was produced (above, right) at Ubol, site of the Thailand-Unesco Fundamental Education Centre. Before a pony-cart library started its travels in the district, handwritten "newspapers" posted in the villages were almost the only available reading material. These news sheets are produced in schools attached to the teacher-training collage at Ubol, where Unesco experts are working alongside Thai educationists.



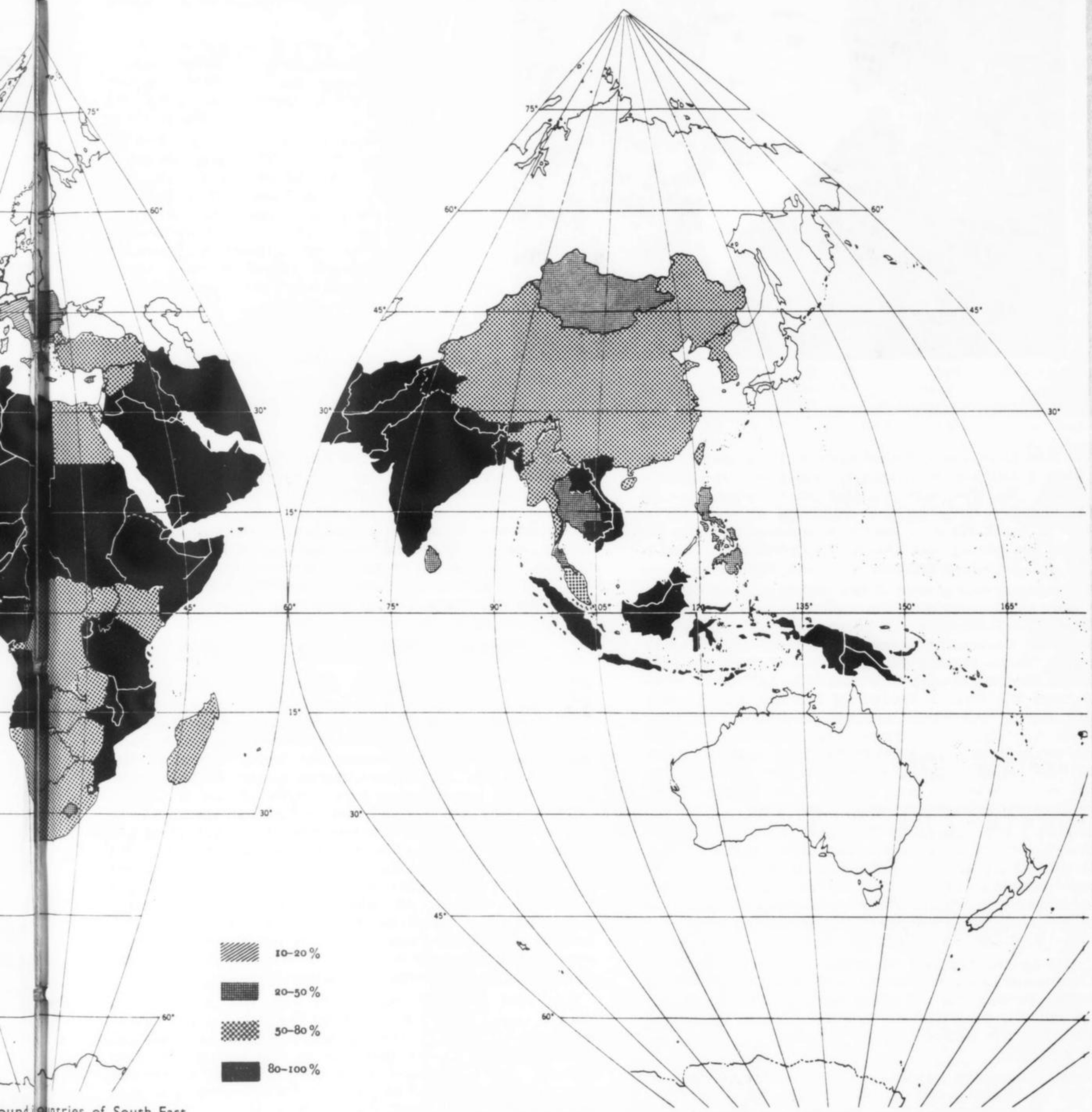
UNESCO photo by Bjorn Berndtson

TESTING GROUND FOR EDUCATION. During a period of 18 months, an experimental training centre was set up in Mysore, India, by the Mysore Adult Education Council and Unesco to give practical training to specialists in fundamental education who would eventually work for Unesco, and to try out new methods of literacy teaching. Experimental classes for adults had to be set up in villages surrounding the Centre. Villages competed fiercely to be chosen for the classes: one offered its best house, another its most attractive classroom. Left, inauguration of one of these classes. A teacher is performing a dedication ceremony to the goddess of learning with an offering of fire and flowers. New methods resulting from world-wide research by Unesco were tested for the first time and proved highly successful. India has several national literacy programmes, in some of which Unesco is collaborating. Of special importance is the National Fundamental Education Centre now being set up near Delhi with Unesco's co-operation. India is also benefitting from Unesco's programme for the production of reading materials for new literates. The Delhi Public Library, set up by the Government with Unesco's help, also plays a major role in the fight against illiteracy.

WORLD ILLITERACY

Adult illiteracy is greatest in Asia and Africa and in parts of Middle and South America, though millions of illiterate persons are still to be found in many other countries where education is well-developed. Countries of South Central Asia contain over 230 million of the world's 700 million adult illiterates. Rather more than a quarter of the world's illiterates live in East Asia. Africa accounts for at least 100 million illiterate persons (80 to 85 per cent of the adult population). A further 100 million illiterates are found i ountr Asia and South West Asia. The whole of Middle and th A 40 million adult illiterates, has an illiteracy rate ap ximat estimated world average (about 44 per cent). Sout Eur another 20 million illiterates and the remainder of th rld's tion is scattered over the rest of Europe, North Amer

...Y AT MID-CENTURY



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According to Unesco's latest study, *Illiteracy at Mid-Century*, from which this map is taken, countries with the highest rates of illiteracy in 1950 included: Afghanistan, Ethiopia, Nepal, Saudi Arabia and Yemen (95-99%); Sudan, Liberia, Libya (90-95%); Morocco, Nigeria, Haiti, Iran, Iraq (85-90%); Algeria, Tunisia, Cambodia, India, Indonesia, Pakistan, Vietnam, Laos and Jordan (80-85%).

THE MAN WHO TAUGHT HIS NATION TO READ

by

J. Alun Thomas

FEW men have accomplished more in their span of life than a humble Welshman by the name of Griffith Jones. He was born in 1683 in Penboyr, one of several parishes lying on the delightful uplands above Tivyside in South Wales, a land distinguished not only for its compelling beauty, but also for its rich literary culture and for the fiercely independent nature of its people.

Griffith Jones was a man of the people and his earliest years were spent in helping the shepherds and in learning the trade of woodturning. It is true that he spent a few years at the Carmarthen Grammar School but he never went to a university nor to one of the well-known academies of the period; yet this man who had scant sympathy from the Church leaders of his day, this humble country parson, was almost solely responsible for teaching most of his fellow-countrymen to read and, almost without realizing it himself, he became one of the pioneers of adult education. Before we explain how he succeeded in his task let us take a brief glance at the state of Wales in the days of his boyhood, round about 1700.

The people were generally poor and though the population of the whole country was well under half a million, yet it proved an almost intolerable strain on the agricultural technique of the time which, like most other things, lagged well behind whatever progress was achieved in England. But neighbourliness and sociability reached a high level and there was little actual want.

An attempt at popular education had been made by the Commonwealth Government in 1650 with its "Act for the Better Propagation of the Gospel in Wales". About 60 free schools, mostly of the grammar school type, were founded, but the Restoration of 1660 dealt a fatal blow to the movement.

A considerable step forward in the education of the poor was the extensive work of the Society for Promoting Christian Knowledge (S.P.C.K.) founded in 1698. At first confined mainly to London, its influence spread rapidly into the rest of England and Wales.

The society proved an admirable friend to Wales, and large quantities of Bibles, prayer books and religious classics in both English and Welsh entered the country and were either distributed free or sold at very small cost. Through its correspondents in all parts of Wales the society set up nearly 100 schools, and so infectious was its enthusiasm for spreading knowledge that several hundred more schools of the same simple pattern were set up in all parts of Wales, and by 1714 as many as 12 diocesan and parish libraries had been established at suitable centres to aid necessitous clergy and others. These schools, though as a rule free, were in some places fee paying; the three R's were again in evidence with the pleasant addition of singing (which was not included in the English schools) and some simple needlework for the girls, the full course taking about four years.

Enfant terrible among the clergy

BUT the fine and consistent effort of the S.P.C.K. was too limited in scope, too inadequate in conception, to meet the needs of the people, and even by the third decade of the century the country's condition was appalling, groaning as it was under the heavy burden of illiteracy and vice. Could the illiterate masses ever be taught to read and think? One man, Griffith Jones, a country parson in South Wales, felt sure that he had the answer to the problem. Rector of Llanddowror, and a brother-in-law of Sir John Phillips, noted educationist and friend of the Wesleys and of Francke, Griffith Jones was a brilliant and persuasive preacher whom thousands of people would walk miles to hear. An *enfant terrible* among the clergy, honoured as a saint by his hearers, condemned and insulted by his enemies, this man found an answer to the grave problem of the times, and by his devotion and persistence brought about a national revival.

The fiery preacher realized by 1730 that an illiterate people could never be saved by the pulpit alone. Education there must be, free, simple in its aim and method, and education in the language of the people. He had already played his part in the S.P.C.K. school movement and the society was to help him in his new project — that of the Circulating Welsh Charity Schools.

His plan was to train schoolmasters in his parish at Llanddowror and send them itinerating from one parish to another at the invitation of the incumbent, the school in any one place remaining for about three months and held generally in the winter months when the farmers were not busy. They had to be entirely free so that even the poorest of the poor could benefit, and adults as well as children were invited to them.

The Dean of Bangor, Dr. John Jones, a man who had

already given practically all his fortune to educate the poor, describes the poverty of the people in the Bangor diocese in a letter dated 20 June 1716 : "It is impossible in those parts to fix the poor children constantly and regularly at School, because they must ever and anon beg for victuals, there being no poor rates settled in those parts. In harvest the poor parents take them out of School, and declare they had rather they should not be taught at all than be debarred the use and service of them."

The reformer set to work on his great task in 1737 and neither the death of his patron, Sir John Philips, in that year nor the jibes and jeers of envious critics deterred him from consecrating all his energies to the realization of his vision.

There were encouraging signs, too, for a number of clergy declared solidly for Jones and assisted him generously in his appeal for funds; squires with Methodist sympathies, and scientists and clergy in England, were to prove strong financial supporters. But the reformer's greatest gain was to have at his side for the best part of 20 years a collaborator of energy and ability in Madame Bridget Bevan. Handsome and accomplished, she stood by Jones' side right through to his death.

What were the schools like? Let Jones speak for himself as far as their working was concerned: "Where a Charity School is wanted and desired, or like to be kindly received, no pompous Preparations or costly Buildings are thought of, but a Church or Chapel, or untenanted House of convenient Situation, is fixed on; and publick Notice given immediately, that a Welch School is to begin there, at an appointed Time, where all Sorts that desire it are to be kindly and freely taught for Three Months; (though the Schools are continued for Three Months longer, or more, when needful; and then removed to another Place where desired.)"

Masters toiled for three or four hours every night or evening and instructed at that time from two to three times as many as were taught in the daytime. Three months was the time allotted for learning to read and to understand the Catechism —the three R's were absent from the circulating schools. In his annual report for 1745-1746 Jones writes: "We do not meddle with teaching any of them Lettering or Cyphering, which would require more Time than their Circumstances and more Expense than my little Cash can afford."

The reformer was eminently practical; instruction was given in the language of the people, and the Welsh language had an overwhelming preponderance at the time. There is no scholar yet who has toiled patiently through the manifold reports who has not been amazed at the sweeping success of the schools. One village after another was cured of illiteracy. Slowly but surely darkness was being eliminated from the land. The demand for schools far exceeded the supply of teachers and books available. The people as a whole began to show zeal for learning to read, and to think. As often as not, the Bible itself would be their reader, the alphabet and simple word constructions being printed on the fly-leaf; there, indeed, was infinite material for the learners to ponder over. How was it that illiterate adults were able to read in so short a time? One answer lies in the fact that in its spelling the Welsh language is regular and phonetic.

'Seventies' rush to buy spectacles

GRIFFITH JONES' methods were rough and simple by modern standards, but nevertheless the people's interest and keenness were thoroughly aroused. In some parishes the school would remain for one, two or even three quarters of a year, moving from one place to another in the parish. Much depended upon the keenness of the local incumbent and upon the supply of funds available. The enthusiam aroused among the masses can be gauged by the heavy demand for spectacles so that the older pupils, many of them septuagenarians, could benefit from the instruction.

Apart from malicious attacks by his greatest detractor, John Evans, Jones experienced some trouble with some of the masters, particularly those who were inclined to Methodism, a movement which was much to the dislike of the clergy. But he strove to exercise discipline in this as in other matters, and in his voluminous correspondence he shows great sagacity and common sense. Though a loyal priest of the Church who never neglected his flock and taught the Church's doctrine wholly, there is plenty of evidence that he was sympathetic at heart to reformation within the Church, and we have no

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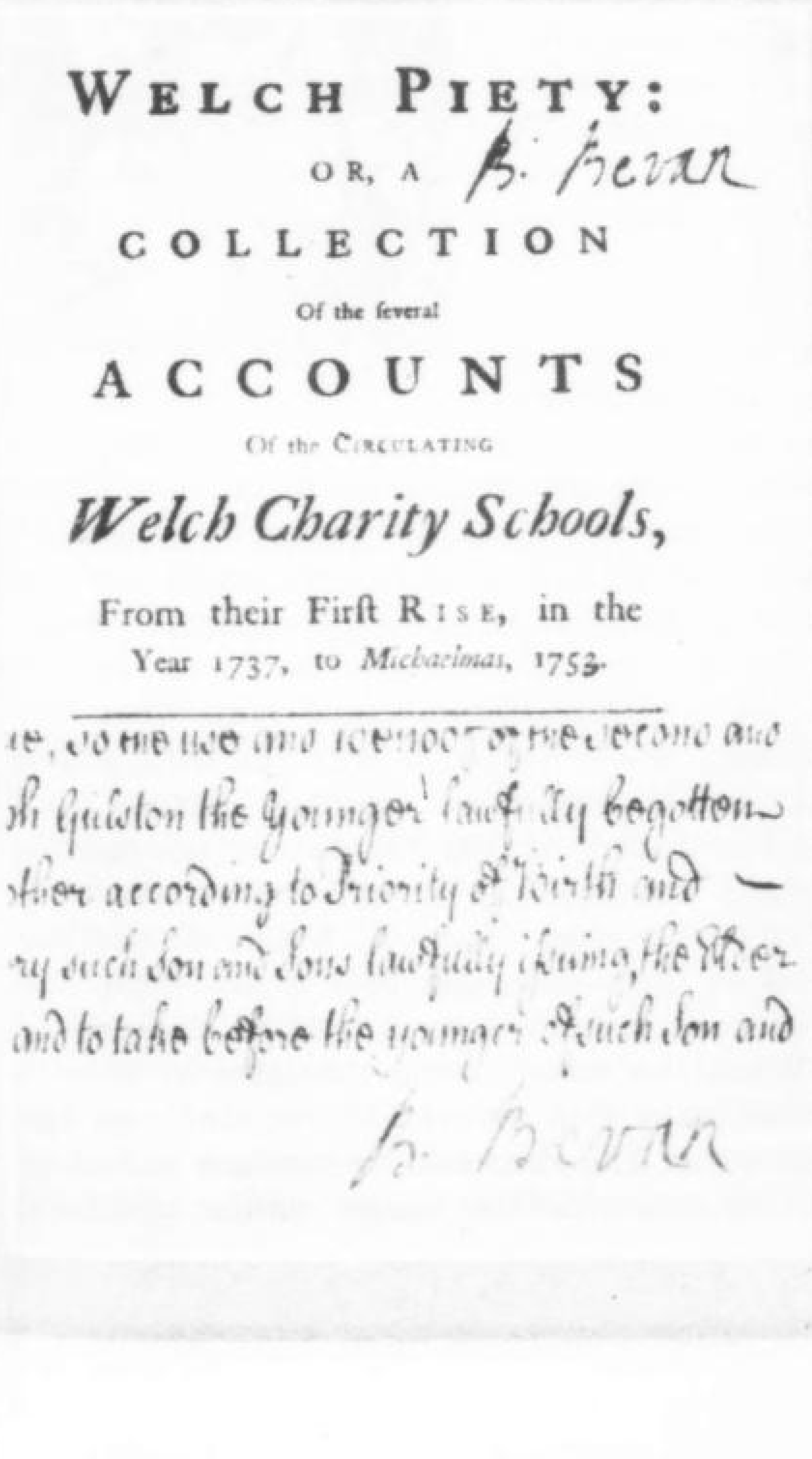
WELCH PIETY:
OR, A B. Bevan
COLLECTION
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Welch Charity Schools,
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B. Bevan

EDUCATION BECOMES A FAMILY AFFAIR

In the first half of the 18th century Wales became a vast "classroom" and education a family affair as old and young alike flocked to the circulating schools of Griffith Jones. An *enfant terrible* among the clergy, Griffith Jones was a pioneer of adult education. His circulating schools were the most important experiment in religious education in the 18th century, not only in Wales but in Britain and her dominions. Photos show: Opposite page, portrait of Griffith Jones now in the Museum of the Carmarthenshire Antiquarian Society; Far left, fascimile of title page of *Welch Piety*, a collection of several accounts of the circulating schools from their start in 1737 until 1753. (It bears the autograph of Bridget Bevan, the greatest collaborator of Griffith Jones; Left, Llanddowror Church, of which Jones was Rector for 45 years (1716 to 1761).

Photos courtesy National Library of Wales

THE MAN WHO TAUGHT HIS NATION TO READ *(Continued)*

record of his being hostile to churchmen with Methodist leanings.

His schools were badly equipped and much of his time was taken up with appeals for new impressions of the Welsh Bible and suitable books for instruction. What was available for him was hardly better than the English "battledores" of the period, and in themselves they were of very little help. For this reason the careful selection and training of the masters was all-important.

By modern standards the contribution of Griffith Jones to national education looks very slight, but in its day it fulfilled a truly national demand and that is why the schools were so well attended.

Between 1737, when he began the work, and 1761, the year of his death, nc fewer than 3,495 schools were held with 158,237 scholars attending them. When we remember that most of the masters had many more pupils attending in the evening than in the day classes, it is fair to compute a grand total of at least 350,000 to 400,000 scholars, a figure that is accepted by the best authorities. When we consider that the whole population of Wales in the middle of the eighteenth century was about 400,000, the figures go to prove beyond doubt that this remarkable pioneer working almost singlehanded, realized his dream of teaching a whole nation to read in his own lifetime.

Lonely pioneer of adult education

WHEN we consider the far-reaching scope of the service given, for every county in Wales was amply catered for; when we note, too, the administrative difficulties, the constant appeal for books, the raising of funds, the training of teachers, the handling of endless correspondence, the publication of the well-documented annual reports, it is difficult to realize that all this was planned and carried out by a man racked with asthma who had already passed his fiftieth year at its inception. His faith, ardour and courage are almost Pauline in their grandeur. Unaffected by cynical enemies, undeterred by the coolness of those in high places who should have been among the first to help him, this lonely pioneer toiled on and almost single-handed saved a nation and its language from perishing. It was his achievement to bring into the homes of the people the power to benefit by the rich prose of Bishop William Morgan's translation of the Bible. In a letter to a fellow-clergyman, December 24, 1744, he reveals his passion for his native language:

"I was born a Welshman, and have not yet unlearned the simple Honesty and Unpoliteness of my Mother Tongue; nor acquired the oiliness of the English Language, which is now refined to such a degree, that a great Part of it is near akin to Flattery and Dissimulation." As David Williams has rightly pointed out in his recent book, *The History of Modern Wales* "it would be difficult to exaggerate the greatness of Griffith Jones' work. His conception of education was admittedly narrow, but he should be judged only on the basis of his motive, which was to save men's souls. Nor did he show any great originality in ideas. His greatness lay in his remarkable powers of organization and in his ability to translate his purpose into practical form on a grand scale. He helped to make the Welsh a literate nation, and his circulating schools were the most important experiment in religious education in the eighteenth century not only in Wales but in Britain and all the British dominions."

We can go further and claim for him a place as an honoured pioneer of adult education. His schools catered for all ages. Before the end of the century Wales had its own peculiar Sunday Schools which to this day are for adults as well as children; such were the humble nurseries which provided a strong and abiding framework for the development of adult education throughout the land.

Louis Braille

© Association Valentin Haüy, Paris

Louis Braille unlocked the door to education for millions of blind men and women throughout the world when he invented his simple "touch" alphabet of raised dots. The son of a French sadler, Braille was born near Paris in 1809 and lost his sight at the age of three. In his day the lot of the blind was almost as tragic and hopeless as it had always been in the past. One mark of progress, however, had been the opening of the world's first school for blind children in Paris in 1784. Braille went there as a pupil and eventually became a teacher (he also became one of the best organists in Paris). At the school a system of embossed letters was used to teach the children to read. Then came the revolutionary idea of a French army officer, Charles Barbier de la Serre, to represent letters by raised dots. But Barbier's system was complicated (it was a code and had to be deciphered) and it occupied too much space. So Braille reduced this system of 12 dot squares to six dots which could be felt by the finger tip at one go, and he dropped the cipher, working out various combinations of dots to form the alphabet. When Braille died in 1852 he had no idea that his system would be universally adopted by blind people, and he even had difficulty in getting the method accepted as the official medium of instruction in his own school. Yet today, without the Braille system, the world's 7,000,000 sightless would undoubtedly be deprived of the most powerful key to human freedom and scholarship ever devised for the blind.

Jaime Torrès Bodet

UNESCO

When Jaime Torres Bodet became Director-General of UNESCO, in 1948, he had already behind him a distinguished career as poet, novelist, essayist, educationist, diplomat and international statesman. One of the high points of his career—and certainly one of the most brilliant phases in the history of Mexican education—was the period (from 1943 to 1946) when he served as his country's Minister of Education and initiated and developed a nation-wide campaign against illiteracy. No campaign of such scope or originality had ever before been undertaken in Mexico. Torres Bodet appealed to all educated Mexicans to become "emergency" teachers for at least one of their illiterate countrymen, and he toured towns and villages arousing and inspiring the people. Soon, over 60,000 collective teaching centres were organized and lawyers, doctors, business men, industrialists, farmers and landowners led by the President of Mexico, Avila Camacho, and his wife, joined in as teachers to make the campaign a success. Special wall newspapers were printed and over 10,000,000 elementary reading books and primers began flooding the country. For those of Mexico's Indians who did not speak Spanish, Torres Bodet had special primers prepared in their languages and where these languages had never before been written down he called in teams of linguists to do this. When the results were tabulated after only two years of work, it was found that over 1,200,000 Mexicans had been taught to read and write. The successful campaigns encouraged other Latin American countries to adopt similar methods.

Official Argentine photo

Domingo Faustino Sarmiento

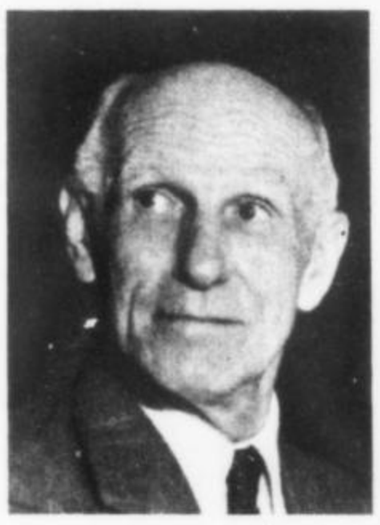
Domingo Faustino Sarmiento was one of the best-known of Argentina's 19th-century writers, but his great life-work was the creation from practically nothing of a national school system which laid the foundations of all education in his country and made it literate. A clear and able writer, Sarmiento was above all a prolific essayist and pamphleteer, though he is also known for longer works such as *Facundo* and *Recuerdos de provincia* (published in French in the UNESCO programme of translations of Representative Works). As a youth he felt the urge to teach and when he was 20 he opened Argentina's first school for adults, at San Francisco del Monte. Because of his political activities he was several times forced into exile in Chile. Here, as in his own country, he steadfastly kept up his educational work, setting up schools to which workers came in the evenings and on Sundays. This resolute educator was convinced that for his people the true path to freedom lay in the alphabet : "A literate people is the strongest rampart against dictatorship," he said. Towards the end of his long life (1811 to 1888) Sarmiento, who had fought fiercely against the regime of the Argentine dictator, Rosas, found himself elected President of the Argentine Republic. He summed up the entire purpose of his life in one phrase when he declared : "We must lay the foundations of the Republic, the government of tomorrow and there can be but one base for this—the school."

The Press Association Inc.

James Yen

During the first World War a young Chinese volunteer student-teacher came to France to work as an interpreter among the 200,000 Chinese workers serving with the Allied armies and in war production. He found they were completely isolated, unable to write to their relatives or read the newspapers. So he started literacy classes. That was the beginning of the Chinese Movement for Mass Education. When the young teacher, James Yen (he later became popularly known as "Jimmy") went back to China he put his experiences in France to use when he set out to "create citizens through education." He launched a "basic Chinese," reducing the 40,000 or so characters in the Chinese language to some 1,300, and the leaders of his movement worked hard among the people to create what they called "a climate of willingness to go to school." To supervise its programme of one hour's lesson each day for four months, the movement eventually had a service of 100,000 teachers, all unpaid volunteers. It constituted a veritable revolution in China for it broke down the thousand-year barriers and brought together coolies and scholars. In 1930 it centered all its efforts on a county of 400,000 people, it opened demonstration schools and it went on to use newly-discovered literacy to attack the fundamental evils of sickness and poverty. The action of this pioneer movement gradually spread throughout China and paved the way for the Government's adult education or rural reconstruction movement.

Frank C. Laubach



U.N.

Standing in a jungle clearing and surrounded by some 40 or 50 people, a tall man unrolled one of several charts he held under his arm. The faces of the people lit up with anticipation. They had come to hear a man who said he could teach them to read. The man was Frank C. Laubach. The place was Ethiopia, but it could just as well have been any of the more than 60 countries where Frank Laubach has been combatting illiteracy for more than a quarter of a century. Born in Pennsylvania, U.S.A., and trained as a sociologist and as a missionary, Frank Laubach found his life's work while living in the Philippines. He discovered that the Moro tribesmen of the interior had never had a written language—and so began his work of organizing a simple system of charts and key words, teaching methods which would enable people to learn their own language. Since then he has, as he puts it, "made lessons" in over 239 tongues and dialects. On large charts he prints a phonetic alphabet having a symbol for each sound of the language he is teaching. Key syllables and words are visualized by pictures. Wherever he goes, Frank Laubach enlists the aid of local teachers and linguists. Once he has developed materials and helped launch the campaign, the people themselves carry it forward. Having learned to read, most persons are anxious to teach others. Laubach has dramatized this technique with the phrase "Each one teach one", and this has become a method which has helped his campaigns to win millions from illiteracy in Asia, the Middle East, Africa and South America.

Manoel Lourenço Filho

UNESCO

Brazil began a full-scale attack on illiteracy in 1947 by launching a nation-wide adult education campaign. The country's tremendous and sparsely populated area and an adult illiteracy figure of over 55 per cent created problems whose solution called for bold conceptions and methods of fundamental education and for vigorous leadership. The man who gave leadership and driving force to the campaign was Manoel Lourenço Filho. One of Brazil's leading educators, author and professor of psychology, Lourenço Filho had already devoted his efforts for more than a quarter of a century to the cause of education in his country. The cost of the first three years of the adult education campaign, 100 millions cruzeiros ($5,000,000), was justified by the results. In 1947, there were 10,416 "Campaign" schools in operation; in the following year, 14,300, and in 1949 the number reached 15,300. In the first three years about 2,000,000 adults and adolescents enrolled and more than 1,000,000 people were taught to read and write. Brazil's approach to fundamental education problems was watched with interest in other countries: the careful balance maintained between school and adult education; the building on a solid basis of statistical fact and the linking together of the varied interests of communities—in literacy, better health and farming. Lourenço Filho's successful leadership of the campaign won him international recognition, and at the 1949 Inter-American Seminar on Illiteracy and Adult Education, he was hailed as *El Maestro de las Americas* (Teacher of the Americas.)

GUIDES AND LEADERS FOR THE VILLAGERS OF LATIN AMERICA

Photos CREFAL

Key personnel for national fundamental education programmes, including literacy campaigns, in Latin American countries have been trained since 1951 in the regional fundamental education and production centre, opened by the Mexican Government and Unesco at Patzcuaro, Mexico. The philosophy of this centre was defined by its director, Lucas Ortiz, when he declared: "It is no use teaching a man to read and write unless you can convince him it will help solve the problems of his daily life. We teach literacy when we teach health or home economics or agriculture." To teach all these things men and women student-teachers from the centre (CREFAL) have gone into villages around Patzcuaro for "on-the-spot" training. In these communities they found the same problems of illiteracy and poverty that existed in their own countries. An experimental literacy centre has been arranged in a village close to Patzcuaro and here classes in reading and writing are given to illiterate and semi-literate adults. These classes offer a practical testing ground for teaching methods and materials. Special courses have been given to CREFAL students who were to be responsible for organizing national literacy programmes in their own countries. Right, CREFAL student makes street name signs for village of Santa-Ana, where previously there had been none because most of the villagers were illiterate. Far right, student teacher from Patzcuaro explains meaning of exhibit used in literacy campaigns to villagers of San Gregorio.

'AL-SAKIEH' : THE WATERWHEEL—For the past two years an attractively-presented wall newspaper has been gaining a growing readership in the villages surrounding the Arab States Fundamental Education Centre (ASFEC) in the Nile Delta (see opposite page). Each time it appears, the people rush to read it—or have it read to them—and gather together to discuss its contents. For *Al-Sakieh*, (The Waterwheel) as it is called, is their newspaper, produced for them by the students and staff of ASFEC. *Al-Sakieh* not only gives new-literate adults a chance to practice their reading and encourages illiterate ones to follow their example, it also broadens the horizon of the village people by keeping them in touch with local, national, regional and world events. It also explains the work the centre is doing in the villages. and, finally, it is an excellent training opportunity for ASFEC students, teaching them how to produce such materials and showing them how they can keep contact with the people among whom they are working. Above, masthead of the wall newspaper. Its title, *The Waterwheel* was chosen because of the pleasant associations this has for the farmers.

TEACHERS FOR THE PEOPLES OF THE ARAB COUNTRIES

Photos ASFEC

Sirs-el-Layyan is a large, straggling village in the Nile Delta some 40 miles north of Cairo, where in 1952, the Egyptian Government and Unesco opened a training centre (12 and 18-month courses) for the men and women who will be leaders in fundamental education in ten Arab countries. Since then, social centres, rural schools and agricultural and health units have grown up in this densely populated district which has progressively become a model experimental area. The villages round Sirs-el-Layyan offer a testing ground for methods and materials which are developed in the centre. In them are found cross-sections of the kinds of living conditions found, with many variations, in Arab countries. A major part of the experimental work concerns literacy, developed into a programme of general education which aims at educating villagers as individuals and as citizens. This programme is closely related to community development projects in such fields as health and agriculture, carried out in the "laboratory" villages. It also includes the production of "readers", literacy "follow-up" materials, and a series of "Teach Yourself" books for people, particularly women, who often cannot attend classes. Far left, listening to the news—newly-literate people are proud to demonstrate their skill and those still illiterate are encouraged and stimulated to attend classes when they see how quickly their friends have learned to read. Left, student teacher from Sirs-el-Layyan holds literacy class for village women.

BOOKS FOR THE NEW READING PUBLIC

by J.E. Morpurgo

Once the reading-interest of a newly-literate person has been aroused, the production of suitable follow-up literature becomes the key to his development as a useful citizen. This is the concept behind an important UNESCO project to encourage the production of reading materials for a tremendous area containing about 500 million people in South Asia. Under this programme, initiated in 1955 and now being put into practice in countries like Burma, Ceylon, India, and Pakistan, research studies have been made, model books for new literates prepared, authors and editors have been awarded training and study fellowships and regional meetings of book production specialists have been held. The most recent of these was a "workshop" seminar in Rangoon which gave writers, illustrators and printer-publishers a chance to discuss their individual yet interlocking problems. Mr. J. E. Morpurgo, Director of the National Book League, Great Britain, who was director of the Seminar, discusses below some of the problems involved in providing the right books for a vast new reading public.

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THE struggle to bring about the state of health which is literacy by ridding the world of the disease called illiteracy has been going on for centuries. What is new is the geographical spread of the wish for literacy and the inevitable impatience with the methods of long-drawn therapy.

I write as one who is not at all certain that it is possible to abandon the patient processes which move a nation generation by generation nearer to complete literacy. I have my doubts as to whether it is possible to cut short the centuries-absorbing business of improving education and of making it available to all, of developing a tradition of sound book publishing and bookselling and of creating the political and economic atmosphere in which publishing and bookselling can survive. I feel that the desire to read must be created and with it the opportunity. I am almost certain that to provide the opportunity it is necessary to work towards an improvement of public and school library services.

There is an argument at least, and one held in quite responsible circles, that the whole fashionable business of concentrating on the new literates and new readers is a mistake, even for the new literates and new readers themselves, and that it is only by ensuring the easy use of books by those who are already attracted to books that one can hope to improve the general standard of literacy in the nations. This argument has as part of its justification much of the evidence in the history of Western Europe, where it has been the improvement of facilities for reading among the middle classes which has ultimately brought about complete literacy.

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ALL these arguments for gradualism sit easily, I admit, on one who comes from a country which (in census terms at least) has achieved universal literacy; for countries where the will to literacy is growing it is necessary to look for abbreviations of the historical process, even if it is essential to guard carefully the view that there are some parts of the process which cannot be abandoned.

It is not enough to teach a child or an adult to read —that would seem obvious. Without the will to read and the chance to read, the mere mechanical ability to spell out words slips back into uselessness and may vanish altogether. Even in those countries which have healthy literacy statistics a considerable proportion of the functionally literate are emotionally illiterate. They glean no advantage from their ability either in ideas, practical improvement, image or pleasure, because, although they can read they never do read. Worse still and more damning for the literacy campaigns, there is in many countries a considerable relapse into functional illiteracy even among those who have just completed schooling or adult literacy classes because so many who have acquired new skills do not have the will or the chance to practise them.

On my recent tour through Asia and especially at the UNESCO Regional Seminar on the Production of Reading Materials for New Literates and the New Reading Public (Rangoon, November, 1957), I gathered the impression that among those primarily responsible for grasping and holding the attention of the new public—authors, publishers, illustrators—there is a majority which would share my view that the principal requirement for books for the new reading public is that they should be attractive in subject matter, style, production, quality and price.

Any sympathy which these book-professionals felt for the prevalent view that it is necessary to combine the task of creating readers with the task of enlightening those readers on matters of policy or social education vanished before their conviction (which I share) that even the most sophisticated reader must be bullied before he will read books about smallpox or drainage, and that the first task of any reading materials project is to persuade people to read and to hold them reading without slipping sideways—and even backwards—into other forms of social improvement.

All accept that it is possible to write a book on smallpox which rings with the magic of art and excitement, but it is extremely difficult, and to the difficulty is added the unattractiveness of the subject matter. Would it not be better to trap readers with materials which they are likely to find seductive? The range of subject matter must vary from country to country. In Asia I would venture that it would include religion, legend, adventure, love-stories (as everywhere else in the world!) and practical farming tips.

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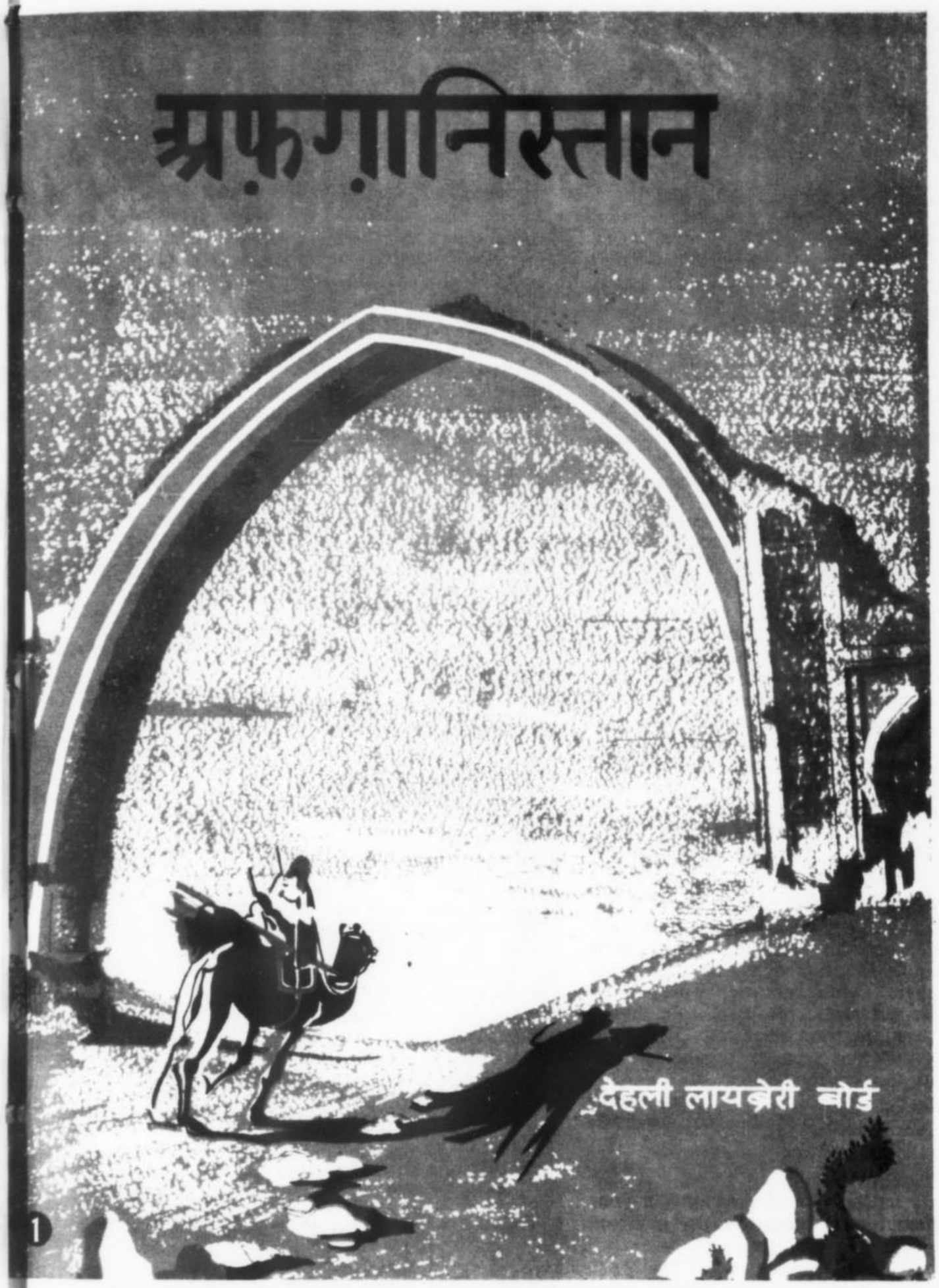
TO produce these attractive books it is necessary to train and encourage good professional publishers, printers and illustrators. To bring them to the public it is essential that we should find methods of creating publicity, distribution outlets and sales points which do not exist in many parts of the world. Again I would venture a personal opinion which has the support of many who were with me at the Rangoon Seminar: giving away books or pamphlets is very often equivalent to wasting them. The reading habit is not firm in the individual until he learns to work for his reading, either in terms of having to pay for it, or at very least in terms of having to look for it on library shelves.

I know that in many countries wage levels are low and the chances of working up much spending on an "essential luxury" such as books small. Unfortunately it is often these same countries which have a small public purse, but, with most of my friends who came to Rangoon, I would urge that it is as important to spend the limited public funds on providing free school books, on building up school and public libraries and on publicizing the advantages of reading, as to go in for production programmes which too often involve large-scale investment.

The book has come in quantity to many parts of the world at about the same time as other and easier forms of communication. Radio, the cinema, the television are not enemies of the printed word —indeed they are allies— but I would urge that they lack the timelessness and the universality which give the book its peculiar virtue. It is not possible to turn back a radio set or to read a film at your own speed. The thought and the skills of all the nations cannot penetrate so effectively into all corners of the world by any other means than by the printed word.

To provide the printed word in sufficient quantities for the new public demands active professionalism and it is perhaps comforting that the Unesco Regional Seminar at Rangoon, saw as the greatest need of the countries of Asia not just more books but better training facilities for publishers, printers, authors, illustrators and book distributors. Without these training facilities it is unlikely that we will be able to provide the right books for the new audience.



AFTER CARE of newly literate people must include a steady supply of graded, interesting and attractively-presented reading material. This is an important part of the work of "literature bureaux", the specialized central agencies which more and more countries are setting up (often with assistance from Unesco—see opposite page) to deal with all aspects of teaching, research and book production. Above, front covers of some publications in different languages produced in Asia, Africa and Latin America: (1) Hindi (2) Burmese (3) Spanish (4) French—Belgian Congo (5) Arabic—The Sudan.

Letters to the editor

Sir,

Please do more numbers like October 1957 (Rights for 900 Million Children) to try and help save the children of the world. It is so easy to forget people starve when one is not hungry, and people must be reminded all the time.

Mark Anderson
Walchwil, Switzerland

Sir,

My wife does an hour morning programme over our local radio station and does a bi-weekly column in our local newspaper. We work together a great deal and she has passed along as much information as she can from THE UNESCO COURIER. She is interested in the U.N. and although her coverage is not large in a metropolitan or national sense, she does believe sincerely that we do not hear enough about the positive contributions being made towards peace through humanitarian deeds and thought

John Haig
Belleville, Canada

Sir,

A group of us (all young parents) were chatting about what we're going to teach our youngsters in the difficult future. I suggested that we should give them THE UNESCO COURIER and the book, "The Family of Man" (see THE UNESCO COURIER, February, 1956). In these they'll find the keys to tolerance, understanding and, if it's vital, contentment. And the more I read your magazines the more I believe this to be true. There seems a whole philosophy, a world of understanding, in what they contain. It's a pity they're not part of every school library and a *must* for high school children... It seems that there could be a day put aside all over the world for something like "Mankind Day". On this day we'd remember all those who have given of themselves, their cash etc. for mankind. We'd think of every person (arts, crafts, social sphere, etc.) who has made life better, easier and contributed towards mankind's progress. It need not be a holiday but articles, films, TV shows, radio works, etc., could be sent out to mark the occasion. It would be a day on which we'd think of who we are, what we are, what others have done for us, what many are sacrificing now, what's ahead and we'd think about being human beings—not Australian, American or Russian, or black or white, Christian or Jew. There's so much each nation owes to others, whites owe non-white and religions owe each other. Schools could do much on this day to get ideas about mankind over. There could be a travelling exhibition with special features showing how not one man, not one religion, nation or government gave us the many blessings, health advances and good things we enjoy—just as not one man or group has led us to the brink of chaos. This day would be for everyone—to restore faith in ourselves and show all are important. I have also a few suggestions for COURIER articles :

Oil-search ; how atomic energy will react ; where oil is, its importance ; New Zealand's Maori people—no race problem there ; Music all over world—how it differs, instruments used, folk music, how used to train deaf, etc. People at Play—different sports organized and played all over the world.

Stan Marks
Melbourne, Australia

Sir,

As a teacher I find great joy in your excellent issues, especially the numbers devoted to a special topic. But I often regret that measures, weights and temperatures are generaly given in Anglo-Saxon indications only. Would it be possible to add the international terms in brackets? Surely the English edition has many readers outside U.S.A. and U.K., especially in Scandinavia, where we have only a very shortened edition in our own language. May I at the same time suggest a new topic ?—the work done by the U.N. to fight the misuse of narcotics. It seems that a lot of information has been collected on the production, effects, trade in, use and misuse of narcotics and of the fight against illicit traffic. Wouldn't it be possible to have a number on this ?

Birthe Levin Hansen
Hellerup, Denmark

Sir,

Dr. H.V. Evatt, one-time President of the United Nations Assembly, with whom I talked in Sydney recently, expressed his determinatiôn to ensure a gracious correction of the great case of injustice inflicted upon the Australian Aborigines, decimated from 300,000 to 70,000 in less than two centuries. The immediate task objectives are (1) Australian and overseas scholarships for Aboriginal pupils, (2) publicity encouraging the interest and initiative of individual citizens, and (3) co-ordination of reports which will form the basis for a Constitutional review of Aboriginal status. I hope the famous Prague Conservatorium of Music and several American Schools will be among the first overseas institutions to welcome a few selected Aboriginal boys and girls. Some of your readers may take interest in this project and provide inspiration.

Frank Sifer
Hobart, Australia

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AUSTRIA. — Verlag Georg Fromme & C°., Spengergasse 39, Vienna V.

BELGIUM. — Louis de Lannoy, 15 rue du Tilleul, Genval (Brabant). 100 Belgian francs.

CANADA. — University of Toronto Press, Baldwin House, 33 St. Georges Street, Toronto 5.
Periodica Inc., 5090 Avenue Papineau, Montreal 34.

CEYLON. — The Associated Newspapers of Ceylon Ltd., Lake House, P.O. Box 244, 100 Parsons Road Colombo 1.

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FRANCE. — Unesco Sales Section, 19 Avenue Kléber, Paris, 16°. C.C.P. 12598-48, Unesco Bookshop, Paris.

GERMANY. — R. Oldenbourg K.G., Unesco-Vertrieb für Deutschland, Rosenheimerstrasse 145, Munich 8.

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INDONESIA. — G.C.T. Van Dorp & Co., Djalan Nusantara 22, Posttrommel 85, Djakarta.

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IRAQ. — Mackenzie's Bookshop, Baghdad.

ISRAEL. — Blumstein's Bookstores Ltd., P. O. B. 4154, Tel-Aviv.

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JAMAICA. — Sangster's Book Room, 99 Harbour Street, Kingston.
Knox Educational Services, Spaldings.

JAPAN. — Maruzen Co. Ltd., 6 Tori-Nichome, Nihonbashi, P.O. Box 605 Tokyo Central, Tokyo.

KOREA. — Korean National Commission for Unesco, Ministry of Education, Seoul.

MALAYAN FEDERATION AND SINGAPORE. — Peter Chong & Co., Post Office Box 135, Singapore.

MALTA. — Sapienza's Library, 26 Kingsway, Valetta.

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NEW ZEALAND. — Unesco Publications Centre, 100 Hackthorne Road, Christchurch.

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PAKISTAN. — Ferozsons : 60 The Mall, Lahore ; Bunder Road, Karachi and 35 The Mall, Peshawar.

PHILIPPINES. — Philippine Education Co. Inc., 1104 Castillejos, Quiapo, P.O. Box 620, Manila.

REPUBLIC OF IRELAND. — The National Press, 16 South Frederick St., Dublin.

SWEDEN. — A/B C.E. Fritzes, Kungl, Hovbokhandel, Fredsgaten 2, Stockholm 16.

SWITZERLAND. — Europa Verlag, 5 Rämistrasse, Zurich.
Payot, 40 rue du Marché, Geneva.
6.50 Swiss francs.

TANGIER. — Paul Fekete, 2 rue Cook, Tangier.

THAILAND. — Suksapan Panit, Mansion 9, Rajdamnern Avenue, Bangkok.

UNION OF BURMA. — S.P.C.K. (Burma) 549, Merchant Street, P.O. Box 222, Rangoon.

UNION OF SOUTH AFRICA. — Van Schaik's Bookstore, Libri Building, Church Street, P.O. Box 724, Pretoria.

UNITED KINGDOM. — H.M. Stationery Office, P.O. Box 569, London, S.E.1.

UNITED STATES. — Unesco Publications Center, 801 Third Avenue, New York, 22, N.Y.

U. S. S. R. — Mezhdunarodnaja Kniga, Moscow. G-200.

YUGOSLAVIA. — Jugoslovenska Knjïga Terazije 27/11, Belgrade.

POSTAGE STAMPS HELP TO FIGHT ILLITERACY

by C.W. Hill

Removing the bandage of illiteracy symbolizes, on this Mexican stamp, the large-scale educational effort made by Mexico in recent years. One of the most remarkable achievements was the nation-wide campaign initiated and developed between 1943 and 1946 by Jaime Torres Bodet, Minister of Education who later (1948-53) became Director General of Unesco. (See page 22)

Peru is carrying out a National Education Plan one of whose most important aspects is rural education. As sixty-four per cent of the population is rural, the Government's efforts are directed towards the inhabitants of the sierra and the montana — rural children, adolescents and adults, in the school, the home and the community. Compulsory tax stamps, like the one shown here, help to pay for these Peruvian educational campaigns.

Carrying out large-scale campaigns for adult education is no easy task in a country like Brazil where there are immense tracts with a population of about one per square mile. But this is what the Government has been doing since 1947 after statistics revealed that over 50 per cent of the adult population was illiterate. Deciding on a mass solution, the Government initiated a plan for opening 10,000 evening schools for adult and adolescent illiterates. Stamp symbolizes light of education.

Stamp from Ecuador, showing an Indian being taught the alphabet, recalls that the country's literacy efforts are directed specially towards Andes' villages where most of Indians (about 55% of country's population) live. In 1942 journalists launched a nation-wide fight against illiteracy, using press and radio to give campaign wide publicity. Two series of stamps were issued to support the scheme. A 1950 census revealed encouraging progress in literacy rates.

"THE postage stamps of a nation are a picture gallery of its glories. They depict in miniature its famous men and women, the great events of its history, its organizations, its industries, its natural wonders", writes Mr. Arthur E. Summerfield, Postmaster-General of the United States of America, in his foreword to a booklet published recently by the American Post Office.

With this assessment of the general educational value of postage stamps there can be little quarrel, and it is therefore not surprising that stamps should also be used for purposes even more precisely educational in character. Among such purposes have been the raising of funds for schools and universities, the dissemination of road safety propaganda, the encouragement of friendly correspondence between young people of different countries, and, perhaps most important of all, the attack on illiteracy.

In Mexico, 43 % of all men, women and children over six years of age are illiterate. Because of the increase in her population the number of Mexico's illiterates was reduced only imperceptibly in forty years, from 7,636,000 in 1900 to 7,544,000 in 1940. Immediately after the Second World War the Mexican Government began a new attack on this recalcitrant problem and one of its first steps was to issue, in November, 1945, a series of twelve postage stamps, all in the same striking design. Inscribed *Campaña Nacional pro Alfabetizacion* the stamps showed hands removing the bandage of illiteracy from the eyes of an adult. *Quitemos la venda!* exclaimed the slogan at the top of the stamps. A year later a single Mexican issue celebrated the progress of the campaign, its design showing a man, no longer blindfold, learning the alphabet.

Brazil is another country where illiteracy among adults is an urgent problem. In 1900 over six million Brazilians above the age of 15 could neither read nor write and in 1940, because of the increase in the country's population, the number of illiterates had risen to over thirteen million. As part of its plan to reduce illiteracy among adults Brazil issued in 1949 a 60-centavos stamp inscribed *Campanha de Educação de Adultos,* and symbolizing the light of education.

Among other South American countries which have issued stamps to help in the fight against illiteracy is Ecuador, whose 1953 series depicted various educational activities among children and adults. In Peru a special 3-centavos stamp was issued in 1950 in aid of the National Education Fund. Its design symbolized the light of knowledge, and the use of the stamp on all mail was made compulsory.

Certain countries have considered that a simplification of their alphabet would reduce illiteracy by making reading and writing easier to learn. Thirty years ago Kemal Atatürk adopted a Latinized alphabet for Turkey and a series of stamps was issued in 1938 to mark the tenth anniversary of the change. Their design portrayed Kemal Atatürk himself teaching the new alphabet, an action which may have to be emulated in other countries before illiteracy is vanquished.

Ataturk, founder of the Turkish Republic, initiated a striking educational reform in 1928 when he introduced the Latin alphabet into his country to replace Arabic script. On this stamp Ataturk is depicted teaching the new alphabet. Within a short time over two million more people had learned to read and write. Since then Turkey's efforts to vanquish illiteracy have been concentrated in its 40,000 villages.

Science has the answer

DO BATS FIND THEIR WAY BY RADAR?

by Gerald Wendt

Many insects emit shrill, high-pitched sounds and some of them are probably too high for the human ear to hear but it is not known that they use them as a guide in flying. Bats are not blind but their sight is so poor that they can do little more than distinguish a brighter from a fainter light and locate its general direction. Thus they can distinguish daybreak and nightfall. But they direct their flight by their very sensitive sense of hearing. They emit a very high-pitched sound, hear the echoes of that sound from nearby objects, and judge the direction and the distance of the object from the nature of the echo. The sound has been recorded by the use of microphones and has been found to be about two octaves higher than the highest sound the human ear can detect. Such short sound-waves can be reflected from objects that are too small or too thin to echo ordinary audible sound. If bats are gagged so that they cannot give out the sound or if they are deafened so that they cannot hear it, they are unable to detect obstacles and crash into them in the dark.

Radar also makes use of echoes but it is not correct to say that bats use "a sort of radar". Radar waves are not sound waves. They are electromagnetic waves, or short radio waves, which are

transmitted and reflected as light waves are and at the speed of light. After they are reflected from an object, such as a plane in the sky that may be 200 miles away, they are focussed on a fluorescent screen and there make a visible picture, as on a television screen.

More remarkable than the ability of bats to fly safely in the dark is their ability to return to their home roost or cave at night from distances as great as 60 miles. They do not use their eyes, for tests have shown that fully blindfolded bats arrive home even more successfully than others. Their echo-sense is also no explanation because they can hardly detect echoes from objects more than 30 feet away. Yet they reach home at their normal flying speed of 10 miles an hour and so must fly there almost direct. The only explanation seems to be that they become as familiar with their home area through their sense of hearing as birds and other animals do by sight.

Is it true that antibiotics gradually become less effective against bacteria and some insecticides become less effective against insects ?

Yes, any *one* antibiotic or insecticide can lose its effectiveness against any *one* colony of bacteria or of insects, respectively. This is because, in the case of both bacteria and insects, many thousands or even millions of individual bacteria and insects are exposed to the drug or the chemical. Most of them are killed but some of them do not get enough to kill them. The few that are able to survive learn to live with the drug or the chemical and, when they reproduce, the next generation is so accustomed to the drug that it can withstand a large amount of it. So they are harder to kill and their resistance to the drug or chemical makes them immune. For this reason, it is usually wise to use enough of the drug or chemical to kill all the bacteria or insects in a colony. Those that have become immune to one antibiotic or insecticide, however, are not immune to another. For this reason, a second treatment is often given with a different kind in order to kill those that escaped the original treatment or became immune to it. A large number of both antibiotics and of insecticides is now available for this purpose.

Can plants be acclimatized as men and animals can ? For instance, can tropical plants be gradually adapted for growth in cold climates ?

Man is the only animal truly adaptable to any climate, but that is only because he has the intelligence to protect himself from extremes by building houses, wearing suitable clothes, lighting fires for warmth, using fans for cooling and changing his diet. Many animals can also make moderate adjustments to a change of climate, especially those species that make homes by burrowing underground to protect themselves from either the heat of the sun or the cold of winter. But those animals that are best adapted to extreme or particular conditions do not survive under adverse conditions. Those that have heavy fur to protect themselves from the cold—such as polar bears—cannot endure hot weather because they have no way of keeping themselves cool. Others with bare skins—like the elephant and the hippopotamus—can keep cool under tropic conditions but are unable to stay warm in snow and ice. Most animals are also equipped for hunting and eating a certain kind of food, such as fish or underwater plants or rabbits or snakes, and starve when they cannot find them—unless they are fed by man. But in the course of many thousands of years animals have wandered over the face of the earth and have often adapted themselves to a different environment by natural selection over many generations. Thus different species of some animal families, like cats, dogs, bears, deer, mice and even camels, can live under climatic conditions that are very different from those of other species of the same family.

Plants are in general much less adaptable. They are well fitted for certain conditions of moisture, of temperature and of sunshine but will seldom survive a change, or if they do survive, they will not bloom or produce seeds and so die out. Juicy, thin-skinned water-plants and swamp plants soon die if they are deprived of water. On the other hand, the hard-shelled cactus and other desert plants are unable to cope with much water. The broad-leaved plants are fitted for life in the shade of trees and seldom do well in direct sunlight. But narrow, thin-leaved plants, like the different grasses, are fitted to grow in direct sunshine and will not survive under trees or in the forest, because they do not get enough sun. All leaves are killed by frost, that is, by a temperature of less than 32° Fahrenheit. In cold climates a plant must either have oily needles instead of leaves—like the pines and spruces—or it must shed its leaves and concentrate its sap underground during the winter, as most plants of the temperate zones do. One other device of many temperate-zone plants is to produce hard, dry seeds which survive the cold while the mother-plant dies, so that a new generation appears each year. Since tropical plants cannot do any of these three things, they never survive a frost.

However, tropical plants can live outside the tropics if the temperature does not reach freezing point. But if they do, they grow much more slowly, do not attain their normal size, and either produce no flowers or their flowers produce no seeds. The lowered temperature and especially the short warm season do not allow them time enough to develop. But equally important is the presence of insects to fertilize the flowers. Many are dependent on certain special varieties of insects to carry the pollen from one flower to another, and when they are removed from their natural environment the necessary insects are usually absent and no seeds are formed. Nevertheless, without seeds or without flowers, tropical plants can survive in dwarfed form in cooler climates but not in cold ones.

GUATEMALA'S PICTURE HOSPITAL

by Bertha Gaster

Not much more than a bus ride out from the busy modern capital of Guatemala, some eight or nine miles over the mountains as the crow flies, lies a ghost town. For over two hundred years Antigua — the Old Town — was capital of the Spanish captaincy-general of Guatemala, second in its time only to Mexico and Peru. In the eighteenth century it was the most populous city in Central America; its university was third on the American continent, its printing-house second; and the great bells rang unceasingly over the city from more than a hundred imposing churches and convents.

All this pride and magnificence came to a sudden end one afternoon in June 1773. A catastrophic earthquake destroyed the town, and reduced most of the buildings to rubble. With the removal of the capital to Guatemala City, Antigua fell into decay. For a long time it was left to the poorest elements of the population to eke out a bare living in hovels among the ruins, until coffee-growing restored a modest prosperity.

Today pretty little houses in ice-cream pink and green stand side by side with Baroque facades in its cobbled streets. Glimpses of tiled patios can be seen from under the crumbling arcades. And everywhere, in abandoned gardens and over alley walls, drip yellow jasmine, white and golden roses and the scarlet hibiscus, as the old town drowses its past away in the siesta hour.

Attempts to preserve something of that past for future generations have been going on for a considerable time. Several of the ruined facades of ancient mansions have been restored, and sculpture and carvings retrieved. On a sunny day in December 1956 in the ancient cloisters of Capucine convent — the only one to survive the earthquake comparatively untouched — specimens of another aspect of that past had been gathered together. Propped against massive pillars, exposed on easels, lying on trestle tables, were a number of paintings. Many of them were religious pictures of Madonnas and Magdalenes and other Biblical subjects which had been hanging in the churches of Guatemala, some of them from the ruins of Antigua. Others were portraits of bygone dignitaries of the Spanish colonial era, or nineteenth century generals and personalities of the young Republic. All of them were in bad condition, discoloured, peeling, some of them still showing the rents and slashes of the 1773 earthquake.

Four men were looking at them, moving them to the light to inspect them, examining the torn canvas and peeling paint. The chief among them, Helmut Ruhemann, was one of the best known experts on picture restoration in the world. Originally in charge of restoration work at the State Art Galleries in Berlin, and later consultant to the National Gallery in London until his retirement two years ago, Mr. Ruhemann has restored paintings by Leonardo da Vinci, Rembrandt, Bellini and many other famous artists, besides devising methods and techniques of restoration, and training students in their use. This was for him the beginning of a three months' mission for UNESCO, under its programme of aid to member states, to make a survey of colonial paintings in Guatemala, and help the country to preserve these records of its historical past.

The three people with him, one a youth of sixteen, followed his every move with closest attention. For Mr. Ruhemann was there not only to survey the paintings, but

also to train a small number of Guatemalan artists in the technique of restoration, so they could carry on the work after his return to England. There had been many applicants, but there was not work to justify the selection of more than three, and Carlos Morales, Luis Alvarez and his son Alberto Luis Alvarez were the ones chosen.

The work of restoring the pictures selected was carried out in Guatemala City, with the assistance and support of the Ministry of Fine Arts and the directors of the national museums and art schools, and with equipment and material provided by UNESCO. Theoretical exposition and practical training went hand-in-hand. "There is no secret in modern restoration techniques", Mr. Ruhemann stressed, "but without a thorough knowledge of correct methods there is great danger of damaging old pictures, and in fact, many great works of art have been injured this way."

Mr. Ruhemann's three pupils followed him step by step through the different processes. They were taught the first stage of preservation, pasting tissue paper over the canvas to hold the loose paint. Then the picture was "lined", stuck to a new canvas with the aid of a thermostatically controlled electric iron. Afterwards it was cleaned with a small swab on a stick, with a mixture of strong solvent and non-active diluent.

"One of the trickiest jobs in my career", recalled Mr. Ruhemann, "was the task of cleaning several Renoirs. It was risky too. You had to handle your swab in a certain way — or you ran the risk of removing paint when you cleaned them." Old paintings in fact, declared Mr. Ruhemann, presented a much less serious problem. "The straight oil or egg paints used by the masters of the Renaissance are much easier to clean. From the eighteenth century on, painters added soft resins to their colours and the cleaning of their work was much more delicate."

Finally came the re-touching. Most of the pigments used to-day are the same as those used in former times, and present little difficulty. "But you have to be a good painter for this stage of the work," said Mr. Ruhemann. "That is why you have to choose your picture-restorers from professional artists. Both M. Morales and M. Alvarez were good painters. M. Alvarez in fact had been restoring paintings for the Archbishop before I came, and his son had been working with him on panel work and gilding. I hope it is going to be possible to arrange to send two of them to Florence or London to complete their training."

At the end of his stay in Guatemala, Mr. Ruhemann organised a small exhibition in the School of Plastic Arts of the pictures on which they had been working, to demonstrate the techniques of restoration, and the work achieved. An interested public were able to see untreated pictures in perfect or bad condition hung beside others in various stages of restoration, repaired but not cleaned, half-cleaned, and finally completely restored, such as a picture of the "Magdalene" dating from 1703. The exhibition was a demonstration of what had been achieved, and the training of three restorers an assurance that the preservation of Guatemala's historical and artistic past in religious and secular painting would continue.

The whole project has aroused such interest that there is now some question of a refresher course being organised in Havana, where a magnificent new museum has been built, to afford students from all the South American and Central American countries an opportunity of taking part.

Colonial art of Guatamala is being brought to light and restored since Unesco sent Helmut Ruhemann, an expert restorer, to this Central American Republic. During a three months' mission Ruhemann surveyed colonial paintings, restored some of them and prepared a training programme for Guatamalan restorers. Left, student restorer uses a special iron to transfer an old painting to a new canvas. Standing by easel, Helmut Ruhemann supervises cleaning of 18th century painting of The Virgin (the work also shown on opposite page).

After preservation techniques the next process is to remove the all dirty varnish (opposite page). This is cleaned away with a swab dipped in a mixture of acetone and turpentine. Any cracks or slashes are filled in with putty and retouching begins. Because a high standard of painting is needed, restorers are usually chosen from ranks of professional artists. Left, Ruhemann, who has restored many masterpieces, including da Vinci's *Virgin of the Rocks*, gives a Guatemalan artist a lesson in retouching.

A pause for discussion between Helmut Ruhemann and his three Guatemalan assistants who followed him step by step through the restoration processes. (The youth seated on left and the man standing on right are father and son.) The work was carried out in Guatemala City with equipment and materials provided by Unesco, and the restored paintings were later exhibited. The portrait on the easel is of Colonel Modesto Mendez, the discoverer of the great Maya remains at Tikal.

UNESCO-Gay Gruner

From the UnescoNewsroom...

ART AT THE FRONTIER: Art reproductions in colour should be treated on the same basis as original paintings, books, newspapers, educational films and science equipment which under a UNESCO agreement are now allowed duty-free into 26 countries. This was urged at a recent UNESCO-sponsored meeting in Geneva by government representatives discussing wider application of the UNESCO "Free Flow" Agreement.

■ **ARISTOTLE IN ARABIC:** *The first complete translation into Arabic of Aristotle's treatise on "Politics" has been published in Beirut in the* UNESCO *series of translations of great works. Other classical authors already translated into Arabic in the same series: Descartes, Montesquieu, Pascal, Shakespeare, Corneille, Locke, Racine and Rousseau.*

OUT OF THE ASHES: Korea will have one of the most up-to-date training hospitals in the Far East when its National Medical Centre, now being built on the site of the former City Hospital in war-damaged Seoul, by the U.N. Korean Reconstruction Agency (UNKRA) is completed. Denmark, Norway and Sweden have begun to despatch some $700,000-worth of equipment and supplies for the new hospital.

■ **FIRST 'EUROPEAN' SCHOOL:** *The first "European" secondary school was opened recently in Luxembourg as an addition to the primary school which has already been serving children of employees at the European Coal and Steel Community since* 1953. *Some* 500 *children of* 11 *nationalities attend courses which are given in French, German, Italian and Dutch and are planned to meet educational requirements of the six member countries.*

U. K. BOOK BOOM: A record number of 20,719 titles was published in the United Kingdom in 1957, including a record figure for new titles (14,798). The increase covers all kinds of books, including fiction (up by 300 titles) and children's books (a striking rise of 200 more than last year). Last record year for book publishing in the U. K. was 1955 (19,962 titles).

■ **YOUNG FARMERS' 'SWOP':** *Under the auspices of International Farm Youth Exchange scheme, young farmers from Luxembourg and the United States have been exchanging jobs and finding out more about farming methods used in each other's countries. Recently a club was formed in Luxembourg where the young farmers of both countries meet and exchange views and ideas.*

'UNESCO: PURPOSE, PROGRESS, PROSPECTS'

A frank appraisal of UNESCO's achievements from 1946 to 1956 has been made by Walter H. C. Laves (former Deputy Director-General of UNESCO) and Charles A. Thomson (a former United States Representative at UNESCO) in a recently published book, "UNESCO: Purpose, Progress, Prospects" (1), a 457-page volume which outlines the character and scope of UNESCO's programme. In their final appraisal of UNESCO's record the authors find that it has been "an instrument and a symbol of international collaboration, adjustment and understanding, contributing to the development of institutions needed in a world community." They warn that UNESCO "as the world focus of men's aspirations in the vast realm of education, science and culture, must always fall short of the hopes placed in it, for these hopes are as limitless as the creative abilities of the human mind itself," but they conclude that "if UNESCO is properly used as a means by which peoples, through their governments, can agree on goals important to all and then devise practical ways of reaching these goals through joint efforts, it is capable of almost unlimited achievement."

Indiana University Press, Bloomington 1957. *Price* $7.50.

MORE MEDICAL SCHOCLS: During the past ten years 108 medical schools were created—more then ever before in a similar period—reports the World Health Organization in its new World Directory of Medical Schools. Each year, 66,700 doctors graduate from 638 medical schools in 84 countries and territories. But distribution around the world is unequal: Europe (population over 619,000,000) has 253 medical schools; Africa (210,000,000 inhabitants) has only 16.

■ **WHAT'S YOUR PROBLEM?** *A provisional international computation centre has been set up in Rome under an agreement between* UNESCO *and the Italian Institute of Higher Mathematics. It will help countries which do not yet have electronic computing equipment to make use of the services of those which do, and in particular it will assist them to put their problems in a form suitable for solution by calculators.*

RUSSIAN STAMP CENTENARY: The 100th anniversary of the first Russian stamp (1858) has been commemorated by an exhibition at the Central Museum of Communications in Leningrad, which included stamps issued independently in each of the 167 districts of tsarist Russia, as well as more than 2,000 issues made in the Soviet Union since August 1921. Among the 3,000,000 specimens in the Leningrad Collection are examples of the world's first stamp from England.

■ **CHROMOSPHERE PROBE:** *Scientists at the Australian Government's solar physics laboratory in Sydney will shortly be using a special filter fitted to a telescope to explore the chromosphere —a mysterious region of hot gases about* 1,700 *miles wide surrounding the sun, which is invisible through ordinary telescopes. It is hoped that this research —part of the research programme of the International Geophysical Year—will help to explain why certain events on the sun affect communications on the earth.*

OPIUM TRAFFIC DETECTIVES: Scientists met in Geneva recently to review an international opium research programme that aims to determine the country of origin of opium seized in illicit traffic. The programme is a joint undertaking of the U.N. and scientists from opium-producing countries. Much of the research work on samples supplied by these countries is carried on in the U.N. Research Laboratory at the Palais des Nations in Geneva.

■ **TECHNICIANS FOR GHANA:** *The College of Technology at Kumasi, in the new state of Ghana, is expanding rapidly and lecturers from the Netherlands, Australia, New Zealand, India, Israel and the West Indies, as well as from Ghana itself and from the United Kingdom have joined its staff. Nearly* 1,000 *students attend the college whose courses include architecture, building, technology, engineering, pharmacy, business management and agriculture.*

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MODERN SCHOOLS FOR MOROCCAN GIRLS

"In that ambiance **of modern culture to which present-day** life leads and **calls us irresistibly**, it is essential that the women of Morocco participate ardently and usefully in the life of the nation..." These words were spoken by Princess Lalla Aisha, eldest daughter of King Mohammed V of Morocco, ten years ago, and since then the women have, in fact, been participating more openly in the now changing pattern of their country's life. There has been no brutal rupture with the traditions of the past, but a gradual change has taken place, and in this evolutionary process thousands of Moroccan girls and young women have been shown how to adapt themselves to a more modern form of life in Women's Centres created by the Ministry of Education. In five years thirty-five centres were opened in all parts of Morocco, staffed by French women educators and teachers who are progressively training Moroccan teachers to be their successors. By educating these girls and young women, the centres are also helping to reinforce the ranks of voluntary teachers for Morocco's annual national literacy campaigns. Above, "musical hour" with songs and rhythms at the Rabat centre; left, games in the sand at a girls' holiday camp. (See pages 14/15.)

Photos © Gerda Bohm, Rabat